REMARKS

Claims 1, 2, 4-10 and 12-17 are pending in this application. In the Office Action, the Examiner rejected all pending claims under 35 U.S.C. § 103(a). Applicant respectfully traverses these rejections. For the reasons set forth below, Applicant believes the claims are in condition for allowance and notice to that effect is earnestly solicited.

Drawing Amendments

In the Office Action, the Examiner stated that drawing corrections may no longer be held in abeyance, and required submission of corrected drawings.

Applicants have submitted herewith a communication providing Proposed Drawing Changes, a set of formal drawings, and a marked-up version of the original drawings with amendments marked in red.

Revised Figure Labeling Scheme and Correction of Miscellaneous Informalities

The drawings and specification have been amended to employ a new scheme for labeling the drawing figures. Various informalities have also been corrected. Applicants submit that no new matter has been added. Examiner approval is requested.

At page 17. The specification should have stated "Figure 1C-1" (now amended to be Figure 5) instead of "Figure 1B-2." The specification has been amended accordingly to refer to Figure 5.

Figure 6 (now amended to be Figure 57) previously lacked a lead line from reference number 600. The figure has been amended to add the missing lead line.

Figure 8 (now amended to be Figure 59) previously used reference number 800 three times while reference numbers 802 and 804 are missing from the drawings. The figure has been amended to change two instances of "800" to -802- and -804-.

Reference number "218" was previously used to designate different features in Figures 2C and 10. In Figure 10 (now amended to be Figure 61), reference number "218" should have read -208.- The figure has been amended accordingly to replace "218" with -208-.

Figure 19 (now amended to be Figure 73) previously lacked reference number 1905. The figure has been amended to change "1906" to -1905-.

Figure 21 and Figure 21A (now amended to be Figures 76 and 77) previously used reference number 2110 twice to designate different features of the invention. Figure 21 has been amended to change one occurrence of "2110" to -2109-.

Applicants submit that no new matter has been added. Examiner approval is respectfully requested.

Specification Amendments

Revised Drawing Figure Labeling Scheme

Applicants have amended the specification to reference the revised drawing figure labeling scheme and revised reference numerals. A marked-up version showing changes is also attached. Applicants submit that no new matter has been added. Examiner approval is requested.

Correction of Errors and Informalities

Trademarks have been capitalized at various places in the specification.

The specification previously lacked reference to the nature of reference number 900 of Figure 9 (now amended to be Figure 60). The specification has been amended to include reference to reference number 900 at page 89.

The specification lacked reference to the nature of reference number 2302 of Figure 23 (now amended to be Figure 79). The specification has been amended at page 382 to recite number -2302- instead of "2304".

The specification lacked reference to the nature of reference number 2313 of Figure 23A (now amended to be Figure 80). The specification has been amended at page 383 to recite number -2313- instead of "2314".

The specification lacked an explicit reference to Figure 1C-1 (now amended to be Figure 5). The specification has been amended at page 17 to correct the error.

The specification has been amended at page 117 to change "218" to -208-.

The specification has been amended at page 118 to change "Process Integration tools" to -Process Management tools-.

The specification has been amended at page 133 to change "he repository" to -the repository-.

The disclosure lacked an explicit reference to Figure 13 (now amended to be Figures 64A-64B). The specification has been amended at page 242 to reference Figures 64A-64B.

The specification has been amended at page 382 to change "2304" to -2302-.

Figure 23 and Figure 23A (now amended to be Figures 79 and 80) previously lacked reference number 2314 as discussed on page 382 of the specification. The specification has been amended at page 382 to recite reference number -2313- instead of "2314".

The specification has been amended at page 385 to change "Figure 23" to -Figures 79 and 80- (formerly Figures 23 and 23A).

Figure 24 (now amended to be Figure 82) lacked reference number 2408 as discussed on page 400 of the specification. The specification has been amended at page 400 to remove reference number 2408.

The specification has been amended at pages 421, 422, and 432 to clarify that the cites to p.40 and p.46 refer to the Gagne reference.

The disclosure lacked an explicit reference to Figure 33 (now amended to be Figure 94). The specification has been amended at page 468 to include a reference to Figure 94.

The embedded hyperlink and/or other form of browser-executed code has been removed from pages 26, 33, 37, 190, and 216.

Claim Amendments

Claims 1, 9 and 17 have been amended to recite a plan "for selling at least one of products and services to a target market" and indicia coding the components of the existing network framework "that relate to products or services that are likely to be purchased by the target market." These amendments are supported on page 20, lines 26-32 of the specification and in Figure 12 (formerly Figure 1G-1). The amendments are intended to more clearly define the subject matter which Applicants claim as their invention. Applicants submit that no new matter has been added.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1, 2, 4, 7-10, 12, and 15-17

This is the second non-final Office Action in this matter. A first Office Action mailed April 11, 2002 rejected the claims under 102(e) and 103(a). Applicants submitted an Amendment and Response on July 11, 2002 traversing these rejections

In the present Office Action, the Examiner rejected claims 1, 2, 4, 7-10, 12, and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over CACI (a collection of articles cited in PTO-892 Item:U-X), in view of Battat et al., patent number 5,958,012, and further in view of Official Notice, and further in view of Ruffin et al., patent number 6,249,769.

Cited References

Ruffin and the CACI references discuss network planning software. Battat discloses objects that are decorated with colors and texture coverings (col. 12, lines 54-56, FIG 10J & 10K) and color coded alerts (col. 5, line 5).

Claim 1

Applicants note that Figure 23 (formerly Fig. 1M) and the specification at page 20, line 19 to page 21 line 22 relate to the claims of this application.

Claim 1 as amended herein recites a method for effectively selling at least one of products and services comprising the steps of:

(a) determining an existing network framework;

(b) defining a plan for selling at least one of products and services to a target market, the plan including improvements to the existing network framework;

(c) displaying a pictorial representation of the existing network framework and a plurality of components of the existing network framework; and

(d) indicia coding the components of the existing network that relate to products or services that are likely to be purchased by the target market in order to sell at least one of products and services relating to the components of the existing network framework, wherein the at least one of products and services are necessary to implement the improvements.

The Examiner's Rejection

In the October 10, 2002 Office Action at pp. 3 - 5, the Examiner stated:

> CACI teaches CACI Products Company announcing a partnership with Computer Associates (CA) to integrate its industry leading network performance prediction products with CA's Unicenter TNG . . . .
>
> CACI teaches all of the above as noted under the 103(a) rejection but does not disclose specific information about Unicenter TNG . . . . Battat et al. teach automatic detection (auto discovery) of network topology and devices, and automatic layout of logical networks and devices in 3-dimensional space over floor plans or other diagrams (see at least co. 11, line 61 through col. 12, line 8), pictorial representations, color-coded indicia, texture mapping, and shading to highlight indicia and render realistic pictorial representations of infrastructure components and processes (see at least Fig. 10j; Fig 10K . . . .

Applicants respectfully traverse this rejection.

A rejection under 35 U.S.C. 103(a) must provide a prima facie case of obviousness, which has four parts:

a. There must be some suggestion or motivation to combine the prior art.

b. There must be a reasonable expectation of success of the combination.

c. The prior art references, when combined, must teach or suggest all claim limitations.

d. Both the teaching or suggestion to make the combination and the reasonable expectation of success must be found in the prior art, and not in the applicant's disclosure. MPEP 2142; In re Vaeck, 947 F.2d 488, 493 (Fed. Cir. 1991). The Examiner can satisfy the burden of showing the obviousness of the combination only by locating some objective teaching in the prior art that would lead one to combine the relevant teachings of the references. In re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Particular

findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for the combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1359 (Fed. Cir. 1998) (emphasis added).

The Office Action Does Not Set Forth a Prima Facie case of Obviousness

The Examiner has not set forth a prima facie case of obviousness at least because the cited references do not teach or suggest all claim limitations. For example, the cited references do not teach or suggest "indicia coding the components of the existing network framework that relate to products or services . . . in order to sell at least one of products and services," as recited in claim 1 as amended.

Battat discloses "color coded alerts" (col. 5, line 5) and objects that are "decorated" with colors and texture coverings (col. 12, lines 54-56, FIG 10J & 10K) but does not teach or suggest using indicia coding of components of an existing network in order to sell products or services relating to those components.

Claims 9 and 19 respectively recite a computer program and system for implementing the method of claim 1, and are allowable at least for the same reasons. The rest of the claims are allowable at least because they depend from an allowable independent claim.

Accordingly, it is believed that the claims fully comply with § 103(a). Applicants respectfully request reconsideration and withdrawal of this rejection.

Interview Summary

On February 24, 2003, a telephone interview was conducted including Examiner Robert Pond, Katherine M. DeVries Smith of Merchant & Gould, and Applicant's undersigned representative, Jeffrey P. Cook, also of Merchant & Gould. Applicants' claim 1 and the Battat reference were discussed, but no agreement was reached. Applicants agreed to submit in writing their arguments about the claim elements that are missing in the cited references.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	GUHEEN ET AL.	Examiner:	R. POND
Serial No.:	09/322,073	Group Art Unit:	3625
Filed:	MAY 27, 1999	Docket No.:	8567.108US01
Title:	WEB-BASED ARCHITECTURE SALES TOOL (AS AMENDED)		

OIPE MAR 03 2003 PATENT & TRADEMARK OFFICE TC 3600

SPECIFICATION AMENDMENTS

MARKED-UP VERSION SHOWING CHANGES MADE

Paragraphs starting at the first paragraph on page 4

BRIEF DESCRIPTION OF DRAWINGS

The invention will be better understood when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

Figure [**1A**]**1** is a flow chart depicting multiple coding methods for conveying various information relating to a system such as web architecture framework;

Figure [**1B**]**2** is a flowchart illustrating the method for identifying redundancies and omissions among components of a web based architecture in accordance with one embodiment of the present invention;

Figure [**1B-1**]**3** is a flowchart providing more detail of the method for identifying redundancies and omissions among components of a web based architecture in accordance with one embodiment of the present invention;

Figure [**1C**]**4** is a flowchart illustrating the method of conveying which components of a system are required for implementation of technology in accordance with one embodiment of the present invention;

Figure [1C-1]5 is a flowchart providing more detail of the method of conveying which components of a system are required for implementation of technology in accordance with one embodiment of the present invention;

Figure [1D]6 is a flowchart illustrating the method of prioritizing components of a system that are required for implementation of technology in accordance with one embodiment of the present invention;

Figure [1D-1]7 is a flowchart providing more detail of the method of prioritizing components of a system that are required for implementation of technology in accordance with one embodiment of the present invention;

Figure [1E]8 is a flowchart illustrating the method of indicia coding system components to be delivered in different phases in accordance with one embodiment of the present invention;

Figure [1E-1]9 is a flowchart providing more detail of the method of indicia coding system components to be delivered in different phases in accordance with one embodiment of the present invention;

Figure [1F]10 is a flowchart illustrating the method of comparatively analyzing network entities in accordance with one embodiment of the present invention;

Figure [1F-1]11 is a flowchart providing more detail of the method of comparatively analyzing network entities in accordance with one embodiment of the present invention;

Figure [1G]12is a flowchart illustrating the method for selling products in accordance with one embodiment of the present invention;

Figure [1G-1]13 is a flowchart providing more detail of the method for selling products in accordance with one embodiment of the present invention;

Figure [**1H**]**14** is a flowchart illustrating the method of identifying various components of a system for building, management, and support purposes in accordance with one embodiment of the present invention;

Figure [**1H-1**]**15** is a flowchart providing more detail of the method of identifying various components of a system for building, management, and support purposes in accordance with one embodiment of the present invention;

Figure [**1I**]**16** is a flowchart illustrating the method for mapping products or services in a network framework in accordance with one embodiment of the present invention;

Figure [**1I-1**]**17** is a flowchart providing more detail of the method for mapping products or services in a network framework in accordance with one embodiment of the present invention;

Figure [**1J**]**18** is a flowchart illustrating the method of identifying alliances among a plurality of business entities in accordance with one embodiment of the present invention;

Figure [**1K**]**19** is a flowchart illustrating the method for planning the testing of network components in accordance with one embodiment of the present invention;

Figure [**1K-1**]**20** is a flowchart providing more detail of the method for planning the testing of network components in accordance with one embodiment of the present invention;
Figure [1L]**21**, divided into the partitions Figures **21A-21F**, is an illustration of one implementation of operations **10** and **24** of Figure [1A]**1**;

Figures **21A-21F** provide a detailed illustration of one segment of the implementation of operations **10** and **24** of Figure **1**, as partitioned in Figure **21**;

Figure [**1L-1**]**22** is an illustration of one implementation of operations **10** and **24** of Figure [**1A**]**1**;

Figure [1M]23, divided into the partitions Figures 23A-23F, is an illustration of one implementation of operations **12, 20, 22** and **26** of Figure [1A]1;

Figures **23A-23F** provide a detailed illustration of one segment of the implementation of operations **12, 20, 22** and **26** of Figure **1**, as partitioned in Figure **23**;

Figure [1Nis]24, divided into the partitions Figures 24A-24F, is an illustration of one implementation of operations **14, 16** and **18** of Figure [1A]1;

Figures **24A-24F** provide a detailed illustration of one segment of the implementation of operations **14, 16** and **18** of Figure **1**, as partitioned in Figure **24**;

Figure [1P]25, divided into the partitions Figures 25A-25F, is an illustration of one implementation of operations **14, 16, 18** and **30** of Figure [1A]1;

Figures **25A-25F** provide a detailed illustration of one segment of the implementation of operations **14, 16, 18** and **30** of Figure **1**, as partitioned in Figure **25**;

Figure [1Q] 26, divided into the partitions Figures 26A-26D, is an illustration of one implementation of operation **22** of Figure [1A]1;

Figures **26A-26D** provide a detailed illustration of one segment of the implementation of operation **22** of Figure **1**, as partitioned in Figure **26**;

Figure [1R]27, divided into the partitions Figures 27A-27F, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **27A-27F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **27**;

Figure [1S]28, divided into the partitions Figures **28A-28F**, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **28A-28F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **28**;

Figure [1T]29, divided into the partitions Figures **29A-29F**, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **29A-29F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **29**;

Figure [1U]30, divided into the partitions Figures **30A-30F**, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **30A-30F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **30**;

Figure [1V]31, divided into the partitions Figures **31A-31F**, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **31A-31F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **31**;

Figure [1W]32, divided into the partitions Figures **32A-32F**, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **32A-32F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **32**;

Figure [1X]33, divided into the partitions Figures 33A-33F, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **33A-33F** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **33**;

Figure [1Y]34, divided into the partitions Figures **34A-34B**, is an illustration of one implementation of operation **28** of Figure [1A]1;

Figures **34A-34B** provide a detailed illustration of one segment of the implementation of operation **28** of Figure **1**, as partitioned in Figure **34**;

Figure [1Z]35 is an illustration of an architecture diagram for one implementation of operation **28** of Figure [1A]1;

Figure [1AA]36 is an illustration of an architecture diagram for one implementation of operation **28** of Figure [1A]1;

Figure [1AB]37 is an illustration of an architecture diagram for one implementation of operation **28** of Figure [1A]1;

Figure [1AC]38 is an illustration of an architecture diagram for one implementation of operation **28** of Figure [1A]1;

Figure [1AD]39 is an illustration of an architecture diagram for one implementation of operation **28** of Figure [1A]1;

Figure [1AE]40 is an illustration of an architecture diagram for one implementation of operation **28** of Figure [1A]1;

Figure [**1AF**]**41** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AG**]**42** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AH**]**43** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AI**]**44** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AJ**]**45** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AK**]**46** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AL**]**47** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AM**]**48** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AN**]**49** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [**1AO**]**50** is an illustration of an architecture diagram for one implementation of operation **28** of Figure [**1A**]**1**;

Figure [2A]51 is a schematic diagram of a hardware implementation of one embodiment of the present invention;

Figure [2B]52 is an illustration of the Integrated Development Environment Architecture (IDEA).

Figure [2C]53 is an illustration showing a Development Organization Framework in accordance with one embodiment of the present invention;

Figure [3]54 is an illustration showing a security organization functional according to one embodiment of the present invention;

Figure [4]55 is an illustration showing the responsibilities of an Environmental Management Team;

Figure [5]56 is an illustration showing the responsibilities of an Application Team structure;

Figure [6]57 is an illustration showing a model migration plan in accordance with one embodiment of the present invention;

Figure [7]58 is an illustration showing a single release capability development pipeline in accordance with one embodiment of the present invention;

Figure [8]59 is an illustration showing a multiple release capability development pipeline in accordance with one embodiment of the present invention;

Figure [9]60 is an illustration showing a multiple release capability development pipeline with code base synchronization among three pipelines;

Figure [10]61 is an illustration showing a Development Tools Framework in accordance with one embodiment of the present invention;

Figure [11]62 is an illustration showing information captured in the Repository and reused;

Figure [12]63 is an illustration showing the Repository's central role in the development environment;

Figure [13]64, divided into the partitions Figures **64A-64B**, is an illustration showing an Operational Architecture Framework in accordance with one embodiment of the present invention;

Figures **64A-64B** provide a detailed illustration of an Operational Architecture Framework in accordance with one embodiment of the present invention, as partitioned in Figure **64**;

Figure [14]65, divided into the partitions Figures **65A-65F**, is a block diagram of a Web Architecture Framework in accordance with one embodiment of the present invention;

Figures **65A-65F** provide a detailed illustration of a block diagram of a Web Architecture Framework in accordance with one embodiment of the present invention, as partitioned in Figure **65**;

Figure [15]66 is a flowchart illustrating the commerce-related web application services in accordance with one embodiment of the present invention;

Figure [16]67 is an illustration of one embodiment of the present invention for facilitating a virtual shopping transaction;.

Figure [16A]68 is an illustration of one embodiment of the present invention for facilitating a virtual shopping transaction by comparing different products and services;

Figure [16B]69 is an illustration of one embodiment of the present invention for creating a hierarchy of the features of the items selected in accordance with the customer's profile;

Figure [17]70 is an illustration of one embodiment of the present invention for facilitating a virtual shopping transaction by ascertaining needs of a user;

Figure [17A]71 is an illustration of one embodiment of the present invention for facilitating a virtual shopping transaction by generating a solution based on the requirements of the user;

Figure [18]72 is an illustration of one embodiment of the present invention for allowing a user to customize an item for purchase in a virtual shopping environment;

Figure [19]73 is an illustration of one embodiment of the present invention for advertising in a virtual shopping environment;

Figure [19A]74 is an illustration of one embodiment of the present invention for advertising in a virtual shopping environment;

Figure [20]75 is an illustration of yet another embodiment of the present invention;

Figure [21]76 is an illustration of one embodiment of the present invention for automatically generating a contract between an owner of software and a user of the software;

Figure [21A]77 is an illustration of one embodiment of the present invention for automatically generating a contract between an owner of software and a user of the software

Figure [22]78 is a flowchart illustrating the content channels-related web application services in accordance with one embodiment of the present invention;

Figure [23]79 is a flowchart illustrating the customer relationship management-related web application services in accordance with one embodiment of the present invention;

Figure [**23A**]**80** is a flowchart illustrating a profile management service of the customer relationship management-related web application services in accordance with one embodiment of the present invention;

Figure [**23B**]**81** is a flowchart illustrating a profile management service of the customer relationship management-related web application services in accordance with one embodiment of the present invention;

Figure [**24**]**82** is a flowchart illustrating the content management and publishing-related web application services in accordance with one embodiment of the present invention;

Figure [**25**]**83** is a flowchart illustrating the education-related web application services in accordance with one embodiment of the present invention;

Figure [**25A**]**84** is a flowchart illustrating one manner of generating an educational curriculum in the education-related web application services in accordance with one embodiment of the present invention;

Figure [**25B**]**85** is a flowchart illustrating one manner of generating an educational curriculum in the education-related web application services in accordance with one embodiment of the present invention;

Figure [**26**]**86** is a flowchart illustrating the web customer-related web application services in accordance with one embodiment of the present invention;

Figure [**26A**]**87** is a flowchart illustrating one component of the web customer-related web application services in accordance with one embodiment of the present invention;

Figure [**27**]**88** is a flowchart illustrating the security services in accordance with one embodiment of the present invention;

Figure [28]89 is a flowchart illustrating the network services in accordance with one embodiment of the present invention;

Figure [29]90 is a flowchart illustrating the internet services in accordance with one embodiment of the present invention;

Figure [30]91 is a flowchart illustrating the client services in accordance with one embodiment of the present invention;

Figure [31]92 is a flowchart illustrating the data services in accordance with one embodiment of the present invention;

Figure [32]93 is a flowchart illustrating the integration capabilities in accordance with one embodiment of the present invention;

Figure [33]94 is a flowchart illustrating the miscellaneous services in accordance with one embodiment of the present invention;

Figure [34]95 is a flowchart illustrating the directory services in accordance with one embodiment of the present invention;

Figure [35]96 is a flowchart illustrating the management and operations services in accordance with one embodiment of the present invention; and

Figure [36]97 is a flowchart illustrating the web developer services in accordance with one embodiment of the present invention.

Second full paragraph of page 14:

As shown in Figure [1A]1, the presentation method of the present invention first includes displaying a pictorial representation of a system, i.e. web architecture framework, including a plurality of components. Note operation **10**. Next, in operations **12-30**, the pictorial representation is indicia coded in order to demonstrate any one or more of various aspects of the system. Such indicia coding may take the form of color coding, texture coding, shading coding, or any other coding which is capable of conveying the desired information.

Second full paragraph of page 15:

Figure [1L]21 shows an example of the aforementioned pictorial representation, or "base chart". In the example where the system is a web architecture framework, such pictorial representation depicts all of the application capabilities and associated infrastructure services required to establish a comprehensive web presence. A plurality of components are shown which are necessary to afford various activities over the Internet. Such components may include: an electronic commerce component, a content channels component, an administrative component, a customer relationship management component, a content management and publishing services component, an education related services component, and a web customer service component. More detail about these and other components is provided below and with reference to Figure [14]65. In one embodiment, the pictorial representation may be used alone in order to convey various services which would be provided in a business offering.

Third full paragraph of page 15:

To create such a pictorial representation, referring to Figure [1L-1]22, each of the primary components of the system, such as the components listed above, are arranged for display in operation **62**. Examples of primary components shown in Figure [1L]21 include "Security Services", "Commerce", and "Data Services". Preferably, the primary components are grouped under descriptive headings, as in operation **63**. Examples of such headings shown in Figure [1L]21 are "Web Application Services" and Common Web Services". Each of the primary components is formed of a group of secondary components. In operation **64**, each set of secondary components is positioned towards or over each of the primary components in such a manner that a viewer would visually associate a group of secondary components with the proper

primary component. A legend may be provided in operation **65** to provide reference as to what the indicia coding represents. Finally, in operation **66**, the components and legend are displayed.

Last paragraph on Page 15-first paragraph on page 16:

With reference to Figure [**1A**]**1**, operation **12** includes indicia coding in order to provide a diagnostic presentation of a past, current, and/or desired web presence. By this method, redundant efforts and omissions among the components of a particular implementation of a web architecture framework may be effectively conveyed. An example of indicia coding in accordance with the present description is shown in Figure [**1M**]**23**. As shown, components of the web architecture framework without shading indicate that such components are omitted in the framework (i.e., not provided by services of any vendor). On the other hand, components of the web architecture framework with multiple types of shading indicate redundancy in such components (i.e., provided by services of more than one vendor). To accomplish this, referring to Figure [**1B**]**2**, operation **31** determines at least one area of an existing network framework in which redundancies and omissions of business efforts exist. Operation **32** presents a pictorial representation of the existing network framework including a plurality of components, such as the pictorial representation shown in Figure [**1L**]**21**. Then, in operation **33**, the redundancies and omissions are highlighted by indicia coding the components of the existing network that reside in the area.

First full paragraph of page 16-first paragraph on Page 17:

In one exemplary method to determine whether an area of an existing network framework has redundant or omitted components, a database may be created which includes a listing of all of the components of the area. See operation **31a** of Figure [**1B-1**]**3**. Also, listings of all services provided by vendors that correspond to the components of that area of the framework are created in the same or a second database in operation **31b**. Then, the listing of the components is compared with the listing of the vendor services corresponding to those components in operation **31c** to determine whether and how many vendors supply services to each particular component. A third listing is created in operation **31d**. The third listing lists components not being provided by a vendor service. These components have been omitted by business efforts of the vendors. A fourth listing is created in operation **31e**. The fourth listing includes all of the components that

are provided by services of more than one vendor. These components are being served by redundant business efforts. Alternatively, the fourth listing could include components that are provided by more than one service of the same vendor. A pictorial representation, such as is shown in Figure [1L]21, is prepared, as described above in operation **32**. Then, referring to Figure [1M]23, each vendor is assigned a unique indicia coding. Each of the components provided by a vendor service is indicia coded to indicate which vendor or vendors provide the services, as performed in operation **33**. Any component omitted in the framework has no indicia coding, while any components having redundant business efforts have multiple types of indicia coding.

First full paragraph of page 17:

Operation **14** of Figure [1A]1 includes indicia coding for effectively conveying which components of a system are required for implementation of technology using the web architecture framework, thereby affording a project definition and an implementation plan. See also Figure [1C]4. Operation **34** of Figure [1C]4 displays a pictorial representation of a system including a plurality of components, again, such as the pictorial representation shown in Figure [1L]21. Then the components of the system are indicia coded in order to indicate required components for the implementation of the system. See operation **35**. An example of such indicia coding is shown in Figure [1N]24. As shown, components of the web architecture framework without indicia coding indicate that such components are not required for implementation of technology using the web architecture framework. In contrast, components of the web architecture framework with indicia coding represent components which are required for implementation of the technology. In the present description, such technology may relate to any sort of use of the web architecture, i.e. specific commerce implementations, etc.

Second paragraph of page 17:

In one exemplary method to determine which components are required for the implementation of the system in order to indicia code them in operation **35**, a database may be created which includes a listing of all of the components of the system. See operation **35a** of Figure [1B-2]5 Also, listings of all components of the framework necessary to the implementation of the system are created in the same or a second database in operation **35b**. Then, the listing of the entire set

of components is compared with the listing of the required components in operation **35c**. In operation **35d**, any components that match are indicia coded on the pictorial representation created in operation **34**.

Last paragraph of page 17-first paragraph of page 18:

As shown in operation **16** of Figure [**1A**]1, the indicia coding may be further employed to indicate priority of implementation for components of the system. First, a priority is identified among the plurality of components required for implementation of a predetermined technology. See operation **36** of Figure [**1D**]6. To accomplish this, referring to Figure [**1D-1**]7, a listing of all of the components required for implementation of the technology using an existing network framework is compiled in operation **36a**. Priority may be determined based on a requirement that certain components be in place before other components will perform properly. In such case, primary components, which should or must be installed before other secondary components will function properly, are positioned forward of, or in an otherwise prioritized relation to, the secondary components in the listing in operation **36b**. Further, any tertiary components that should or must be installed after a particular secondary component should be positioned below the corresponding secondary component on the listing, as in operation **36c**. Thus, the listing provides a particular order in which the components of the network framework should or must be installed. It should be noted that this procedure can be followed for any particular area of the network framework or the entire network as a whole.

First full paragraph of page 18:

Then, referring back to Figure [**1D**]6, a pictorial representation of the existing network framework and its components is generated in operation **37**. Operation **38** indicia codes a first component or components of the existing network framework in order to indicate that the first component is a primary component, as selected in operation **36b**, which must be implemented first. Operation **39** indicia codes a second component and any remaining components of the existing network framework in order to indicate that the second component and remaining components are secondary components, as determined in operation **36c**, and must be implemented after the first component. For example, second components which should be provided only after other necessary first components are in place may be distinguished from the

primary components by having indicia coding unique with respect to the indicia coding of the first components, and likewise for tertiary components, etc.

Last paragraph of page 18-first paragraph of page 19:

Further, indicia coding may indicate particular phases in which components of the system are delivered, and more particularly the order of delivery of various components of the web architecture framework. Note operation **18** in Figure [**1A**]1. Referring to Figure [**1E**]8, operation **40** displays a pictorial representation of an existing system including a plurality of components. Then, in operation **41**, a first set of components that are to be delivered in a first phase are selected and presented by indicia coding the same. To perform operation **41**, for example, referring to Figure [**1E-1**]9, components of the system that are required to create the base framework of the system are selected to be delivered in the first phase in operation **41a**. Further, in operation **41b**, the remaining components are separated into primary and secondary components, in which the primary components must be installed before the secondary components in order for the secondary components to function properly. The primary components may also be selected to be delivered in the first phase in operation **41c**. Finally, in operation **42**, a second set of components that are to be delivered in a second phase are selected and presented by indicia coding the same in a manner unique with respect to the indicia coding of the first set of components. Such second set of components may include some or all of the secondary components found in operation **41b**. Referring to Figure [**1P**]25, an exemplary first set of components is identified in the legend under "First Delivery". In Figure [**1P**]25, second and third sets of components are identified in the legend under "Second Delivery" and "Third Delivery".

Last paragraph of page 19-first paragraph of page 20:

Operation **20** of Figure [**1A**]1 includes indicia coding for effectively comparing a plurality of entities which, in the present description, may refer to any organization including, but not limited to vendors, companies, and/or any other community or the like. In one embodiment, the present method may allow architecture definition and/or software/vendor assessment. In such embodiment, the components of the system are indicia coded in order to compare the services or products such as software of prospective third-party vendors who may stand alone, be part of a partnership, etc. In particular, operation **43** of Figure [**1F**]10 determines the structure and/or

organization of a current network framework. Operation **44** displays a graphical depiction of the current network framework and a plurality of components thereof, such as the graphical depiction shown in Figure [**1L**]**21**. A comparative analysis of the vendors is presented with indicia coding that highlights aspects of (i.e., services provided by) the vendors. See operation **45**. The presentation of the comparative analysis is accomplished in operation **45a** of Figure [**1F-1**]**11** by assigning each vendor a unique indicia coding. In operation **45b**, a database is created that includes all of the products and services of at least two vendors of web-based products or services. The products and services in the database are compared to the components of the network framework in operation **45c**. In operation **45d**, each component that matches a service or product offered by a vendor is indicia coded on the graphical representation created in operation **44**, with the indicia coding corresponding to the vendor of the service. Then a visual comparison of the services offered by each vendor in relation to the entire network framework may be made. Figure [**1M**]**23** shows one way the present method may be implemented.

Last paragraph of page 20-first paragraph of page 21:

Operation **22** of Figure [**1A**]**1** is provided for effectively conveying which of the components and capabilities of a system have products and services available for sale, thereby serving as a selling tool. This is accomplished by indicia coding the components of the system in order to show which of the components has services and products that can be provided. In particular, referring to Figure [**1G**]**12**, operation **46** determines the organization and components of an existing network framework. A database is also created which includes a compilation of all of the products and/or services offered by the various components. Operation **47** defines a plan which includes improvements to the existing network framework. For example, in operation **47a** of Figure [**1G-1**]**13**, a target market is selected based on buying habits, age, gender or some other criteria. In operation **47b**, a sales program is tailored to appeal to the target market by selecting only specific components having products or services likely to be purchased by the target market. Then, in operation **47c**, the products or services related to the chosen components are chosen to be offered for sale.

Second paragraph of page 21:

Figure [**1M**]23 shows an example of operation **22** of Figure [**1A**]1. As shown, various available components are indicia coded. As an option, the available components, or capabilities, may be broken down in a bulleted format. Note Figure [**1Q**]26, which is exemplary of a bulleted list of components. It should be noted that such a list may be provided for any combination of components, including all of the components. As an alternative to selecting products and services to sell, the present invention may specifically indicate which specific capabilities are available to potential clients or customers. As such, the present method of indicia coding is effective in showing such prospective clients or customers a comprehensive view of what it takes to implement solutions. Further, new opportunities may be identified through assessment of the displayed information.

Third full paragraph of page 21:

In various other embodiments, the present invention may be used to clearly articulate all the services that would be provided in any type of new business offering. In operation **24** of Figure [**1A**]1, the components of the system are indicia coded in order to convey information regarding building, managing, and/or supporting the various components of the system. As such, various capabilities may be conveyed in any type of business offering. A pictorial representation of an existing system including a plurality of components is displayed in operation **50** of Figure [**1H**]14. Figure [**1L**]21 shows an example of such a pictorial representation.

Second full paragraph of page 22:

In more detail, referring to operation **51a** of Figure [**1H-1**]15, a database is created having three areas each adapted to contain a group of components of the system. In operation **51b**, components of the existing system that are used for building the components of the system are selected and placed in a first group of components in the first area of the database. These components are indicia coded on the pictorial representation in operation **51** of Figure [**1H**]14. In operation **51c**, components of the existing system that are used for managing the system and its components are selected and placed in a second group of components in the second area of the database. These components are also indicia coded on the pictorial representation, in operation **52** of Figure [**1H**]14, but with a unique indicia coding. In operation **51d**, components

of the existing system that are used for supporting other components of the system are selected and placed in a third group of components in the third area of the database. These components are indicia coded on the pictorial representation, also with a unique indicia coding, in operation **53** of Figure [**1H**]**14**.

Last paragraph of page 22-first paragraph of page 23:

Further, the present invention may be employed in product development planning to communicate where new products fit into an overall architecture picture. As shown in operation **26** of Figure [**1A**]**1**, this is accomplished by indicia coding the components of the system in order to convey information pertaining to which components of a system products or services relate. As such, the present embodiment identifies where various products or services are focused in a system. Note Figure [**1M**]**23** which is representative of an example, where "Vendor 1", "Vendor 2", etc. each represent a service or product. Operation **26** is performed by determining a plurality of network products or services relating to components of a current network framework and presenting the components of the current network framework in a pictorial representation. See operations **54** and **55** of Figure [**1I**]**16**. Operation **56** identifies the components of the current network framework to which each of the network products or services relate by indicia coding the components.

First full paragraph of page 23:

In one example of operation **26**, a first database is created in which selected services are compiled. See operation **56a** of Figure [**1I-1**]**17**. In operation **56b**, a second database is created. The second database has each of the services offered by the current system grouped by system component. The two databases are compared in operation **56c**, and the components which have services matching the services of the first database are listed in operation **56d**. The listed components are indicia coded on the pictorial representation in operation **56e**.

Second full paragraph of page 23:

In operation **28** of Figure [**1A**]**1**, one embodiment of the present invention identifies alliances among various business entities in certain components of a system. To accomplish this, the components of the system are indicia coded to indicate in which components of the system

alliances exist between various business entities, i.e. companies, etc. This enables one to effectively discern how to use products in the components of the system where such alliances exist. The procedure for performing operation **28** begins by identifying at least one alliance among a plurality of business entities in terms of components of a current network framework. Note operation **57** of Figure [**1J**]**18**. A pictorial representation of the current network framework and the components is displayed in operation **58**. Operation **59** conveys the alliance or alliances by indicia coding the components of the current network framework in which the alliance or alliances exist. More detail is provided below.

Last paragraph of page 23-first paragraph of page 24:

Finally, in operation **30** of Figure [**1A**]**1**, it is shown that one embodiment of the present invention may be used in test planning or the like. This is accomplished by indicia coding the components of the system in order to convey the manner in which the components of the system are to be tested. An example of such technique is shown in Figure [**1N**]**24**. The present invention has a broad applicability across all industry groups through customization of the pictorial representation and indicia coding. In operation **60** of Figure [**1K**]**19**, a pictorial representation of an existing network framework including a plurality of components is displayed. In operation **61**, the components of the existing network framework are indicia coded in order to convey a plan by which the components of the system are to be tested. Looking to Figure [**1K-1**]**20**, it is seen that one method of performing operation **61** includes devising a plan for testing the system. See operation **61a**. The plan may be based on administrator or programmer testing specifications. In operation **61b**, a plurality of components are selected for testing based on the plan. The selected components are then indicia coded on the pictorial representation in operation **61c**. Thus, a pictorial depiction of the testing plan is created.

Second full paragraph of page 24:

Referring again to operation **28** of Figure [**1A**]**1**, and more particularly to Figures [**1J**]**18** and Figures [**1R-1Y**]**27-34**, it is seen that Figure [**1R**]**27** provides an exemplary pictorial representation of various components of a web architecture framework, each component being represented by a box. Three business entities are represented in this example as Business1, Business2, and Business3. Each business entity has a unique indicia coding, as shown in the

legend. Indicia coding is provided in each component box that has related products or services offered by a business entity. For example, in the Security Services section, the Browser Based Authentication component has all three types of indicia coding. Thus, all three of the business entities provide products or services related to that component. Also in the Security Services section, the Virtual Private Networks component has only two types of indicia coding. Referring to the legend, it is seen that only Business1 and Business2 offer products or services related to that particular component. For clarity, Figures [1S]28, [1U]30, and [1W]32 are provided to illustrate the products or services offered by each individual entity.

Last paragraph of page 24-first paragraph of page 25:

The legends of Figures [1T]29, [1V]32, and [1X]33 illustrate the particular services provided by Business1, Business2, and Business3, respectively. (The chart on the following pages provides more detail as to the services provided by each entity.) Each service has a unique indicia coding, as shown in the legend. Indicia coding is provided in each component box that has a component provided by that service. Looking to Figure [1T]29 in this example, it is seen that Business 1 offers 13 types of services. The Secure Browser Communication component of the Web Services component of the Web Architecture Framework is provided by eight of the services offered by Business1: Netra/ISP Server Bundles, System Management Tools, Business/Java Web Servers, News Server/Forum, Directory Services, Business.net, the Browsers, and the Wallet/Card/eCheck Service.

First full paragraph of page 25:

Figure [1Y]34 is an exemplary data page which provides even more detail for selected components of the Web Architecture Framework. It should be noted that such data pages may be provided to include each of the various components and subcomponents. Each component box has indicia coding again representative of the services which provide that particular component. Alongside each component are various operations associated with that component. Smaller boxes are provided adjacent each operation, one box for each service providing the main component. If a service performs the particular operation, indicia coding representing that service is provided in one of the boxes adjacent that operation. If the service does not perform

the particular operation, its representative indicia coding will not appear in a box adjacent that operation.

Second full paragraph of page 25:

Figures [**1Z**]**35** through [**1AO**]**50** illustrate exemplary architectures of various components of the systems of Business1 and Business2. These Figures also correlate with the appropriate portions of the following chart.

First full paragraph of page 26

1.1 Business1 [(www.business1.com)]

First full paragraph of page 33

1.2 Business2 [(www.business2.com)]

First full paragraph of page 37

1.3 Business3 [(www.business3.com)]

Second full paragraph of page 39:

A preferred embodiment of a system in accordance with the present invention is preferably practiced in the context of a personal computer such as an IBM compatible personal computer, Apple Macintosh computer or UNIX based workstation. A representative hardware environment is depicted in Figure [**2A**]**51**, which illustrates a typical hardware configuration of a workstation in accordance with a preferred embodiment having a central processing unit **70**, such as a microprocessor, and a number of other units interconnected via a system bus **71**. The workstation shown in Figure [**2A**]**51** includes a Random Access Memory (RAM) **73**, Read Only Memory (ROM) **74**, an I/O adapter **75** for connecting peripheral devices such as disk storage units **76** to the bus **71**, a user interface adapter **78** for connecting a keyboard **79**, a mouse **80**, a speaker **81**, a microphone **82**, and/or other user interface devices such as a touch screen (not

shown) to the bus **71**, communication adapter **83** for connecting the workstation to a communication network (e.g., a data processing network) and a display adapter **84** for connecting the bus **71** to a display device **85**. The workstation typically has resident thereon an operating system such as the [Microsoft Windows NT or Windows/95] MICROSOFT WINDOWS NT or WINDOWS/95 Operating System (OS), the IBM OS/2 operating system, the MAC OS, or UNIX operating system. Those skilled in the art will appreciate that the present invention may also be implemented on platforms and operating systems other than those mentioned.

Second full paragraph of page 49:

Figure [**2B**]**52** is an illustration of the Integrated Development Environment Architecture (IDEA). The Integrated Development Environment Architecture provides a development environment framework and associated guidelines that reduce the effort and costs involved with designing, implementing, and maintaining an integrated development environment. IDEA takes a holistic approach to the development environment by addressing all three Business Integration components: organization, processes, and tools.

First full paragraph of page 51:

Figure [**2C**]**53** is an illustration showing a Development Organization Framework in accordance with one embodiment of the present invention. When designing a business application, it is crucial to keep in mind the organization that will use the system. The same is true of the development environment. The development organization's size, structure, experience, and maturity should strongly influence the choice of tools and the way the tools are integrated. If this link is not understood, the benefit of tool support will be minimal in many areas, and may significantly reduce productivity.

Sixth full paragraph of page 53:

Figure [**3**]**54** is an illustration showing a security organization according to one embodiment of the present invention. A Security Management Team may have a security management **300**, under which are an administration team **302**, a projects & planning team **304**, and a business process security team **306**. The size of the Security Management team, and the way in which it

is integrated into the development organization depends on the degree to which security is a factor for each specific environment. For example, the security risks associated with an Internet-based online banking system are far greater than those of a fully isolated client/server system, and therefore warrant a larger team with broader responsibilities and greater influence.

Second full paragraph of page 59:

To ensure that this area receives the necessary attention, an Environment Management team **400** should be assigned these tasks. Figure [4]55 is an illustration showing the Environmental Management Team responsibilities.

Sixth full paragraph of page 60:

The Application team **500** consists of three separate subteams: Application Architecture **502**, Application Development **504**, and System Test **506**. Figure [5]56 is an illustration showing the Application Team structure and responsibilities.

Third full paragraph of page 86:

Stages and their constituents exist as a result of certain user and technical requirements. The technical requirements are derived from the user requirements. It is crucial to develop a migration plan that maps out the progression on configuration packages throughout the systems development life cycle. Figure [6]57 is an illustration showing a model migration plan in accordance with one embodiment of the present invention.

Fourth full paragraph of page 86:

The Figure [6]57 model allows the development and testing of architecture components independent of application components. The Technology Architecture team can develop **600**, assembly test **602**, and system test **604** their components before delivering them to the development environment for the application developers. This ensures that the architecture is thoroughly tested before being used by the Application teams. The model also illustrates the progression of architecture and application components through the systems development life cycle. The application developers can then develop **606**, assembly test **608**, and system test **610** their components before user acceptance tests **612**. The model is a temporal one and thus

suggests that architecture must be present at a given stage before the introduction of application components.

Third full paragraph of page 89:

The pipeline strategy for a program must incorporate code base synchronization. Code base synchronization must occur among the three pipelines to ensure that the three code bases eventually result in one version in production. Figure [9]60 is an illustration showing a multiple release capability development pipeline with code base synchronization 900 among three pipelines.

First full paragraph of page 117:

Figure [10]61 is an illustration showing a Development Tools Framework in accordance with one embodiment of the present invention. The development environment is built upon an integrated set of tools and components, each supporting a specific task or set of tasks in the development process. As with processes and organization, the central component, System Building, is supported by the eight management components:

Seventh full paragraph of page 117:

- **Release Management tools [218]208** manages the simultaneous development of multiple releases

Second full paragraph of page 118:

- Process [Integration]Management tools 1006 enforce the correct sequencing of tasks and tools in conformance with a pre-defined methodology

First full paragraph of page 133:

The [he] repository may need to be extended by the Engagement team to support custom objects defined by the Application Development team. Some repositories support user-defined objects as part of the base functionality. Others allow customization of the repository by the user while some are not designed for customization at all. If the repository requires extensive customization, a buy versus build decision may be required.

Eighth full paragraph of page 137:

Figure [11]62 is an illustration showing information captured in the Repository and reused.

First full paragraph of page 188:

Tools such as [MS Word]MS WORD, [MS PowerPoint]MS POWERPOINT, or [ABC Flowchart (Micrografix)]ABC FLOWCHART (MICROGRAFIX) applications, may be used to produce these deliverables. Specific modeling tools do exist, however, and provide advantages such as cross referencing (for example, are all the methods used in the Interaction diagrams described in the class definitions?), automatic propagation of changes to other diagrams, generation of reports, and generation of skeleton code.

Fourth full paragraph of page 190:

- C++ [- available from http://www-users.cs.umn.edu/~kotula/cocoon/cocoon.htm]

Fifth full paragraph of page 208:

The platform(s) that must be supported, i.e., MS-DOS, [Windows]WINDOWS, IBM OS/2, UNIX, or [UNIX Motif] UNIX MOTIF, are an important consideration, as are any hardware restrictions.

First full paragraph of page 216

Frameworks may be found on the market which provide generic components for general business processes such as general ledger, sales order processing, inventory management or product distribution. For example, IBM San Francisco offers business components for the Java environment. [(see http://www.ibm.com/Java/Sanfrancisco)]

Third full paragraph of page 237:

Such tools include dynamic analyzers and execution logs. The Test Execution platform may differ from the development platform if development is conducted in one environment (for example, [Windows NT] WINDOWS NT workstations) and deployed on a different environment (UNIX workstations).

Second full paragraph of page 242:

As shown in [Figure 14] Figures **64A-64B**, the Operations Architecture is a combination of tools, support services, procedures, and controls required to keep a production system up and running efficiently. Unlike the Execution and Development Architectures, its primary users are the system administrators and the production support personnel.

Fifth full paragraph of page 258:

The scheduler will communicate with other schedulers on other systems to run a in a close relationship with the ability to support multiple heterogeneous platforms: MVS, [Windows NT]WINDOWS NT, UNIX, and AS/400.

Second full paragraph of page 268:

The product should support multiple heterogeneous platforms: [Windows NT]WINDOWS NT, AS / 400, MVS and UNIX.

First full paragraph of page 296:

The supporting infrastructure is the subset of operating systems, utilities, languages, and protocols used to support the management of the system. The supporting infrastructure is most often determined by the execution and development environments and the business applications on the system. It is necessary to ensure that the other components of the operational architecture are compatible with the existing supporting infrastructure. This limits the number of possible tool set solutions. Examples of operating systems include HP-UX, AIX, [Solaris]SOLARIS, SCO, [Novell NOS]NOVELL NOS, MVS, OpenVMS, NT and DOS. Examples of support utilities include PS, GREP, IBCOPY, TAR, CPIO and clock correlation. Examples can be

broken down according to their function within the OSI model. Session protocols include SNMP, CMIP, FTP, and RPC. Transport protocols include TCP and UDP. Network protocols include IP and IPX. Data-Link protocols include Token Ring, Ethernet, X.25, ATM, SONET, and Frame Relay.

First full paragraph of page 305:

The foregoing development and operation architecture framework of Figures [2-13] 2-64 may thus be employed in the generation of an Internet architecture framework like the one shown in Figure [14]65 to support various features such as an electronic commerce component **1400**, a content channels component **1402**, an administrative component **1404**, a customer relationship management component **1406**, a content management and publishing services component **1408**, an education related services component **1410**, or a web customer service component **1412**.

Last paragraph of page 319-first paragraph of page 320:

One embodiment of the present invention, as shown in Figure [15]66, is provided for affording a combination of commerce-related web application services. Various features are included such as allowing purchase of products and services via a displayed catalog in operation **1500**. As an option, a virtual shopping cart environment may be provided. Further, in operations **1502** and **1504**, data, i.e. specifications, details, etc., relating to the products and services are displayed along with a comparison between different products and services. Data relating to needs of a user may also be received for the purpose of outputting a recommendation of the products and services based on the inputted needs. See operation **1506**. Optionally, features of the products and services may be selected in operation **1508** based on user profile in order to configure a specifically tailored product or service. Alternatively, features of the products and services may be listed in order to allow the user to configure a specifically tailored product or service. Operation **1510** allows one or more of the products or services to be advertised. Yet another aspect of the present invention includes outputting an estimate relating to a price and/or availability of the products and services. Note operation **1512**. Further, in operations **1514** and **1516**, an order for the products and services may be received and processed, after which a tax and a shipping fee are calculated. A status of delivery for one or more of the ordered products and services may be provided in operation **1518**.

Last paragraph of page 326-first paragraph of 327:

Referring to operation **1500** of Figure [15]66, one embodiment of the electronic commerce component of the present invention is provided for allowing purchase of products and services via a display catalog. The display catalog may display linkable pictures, such as visual representations of products for sale. The display catalog may also display linkable text which could represent a product or family of products, as well as services offered. Other linkable text or pictures could be implemented to provide multiple ways to traverse the display catalog to ease navigation along a page or between various pages. An exemplary link would include at least one textual or picture link displayed on each page of the display catalog that would permit a user to purchase the good or service shown on that page or associated with a particular good or service displayed on the page. Such link may resemble a shopping cart.

Last full paragraph of page 327:

As shown in Figure [15]66, operation **1502** outputs data relating to at least one of the products and services. Such data may include details of the products or services as well as specifications. The data and comparisons may be accessed through linking of pages containing the data with linkable pictures and text. For example, a more detailed picture of a particular product illustrating its most salient features may be linked to a smaller or more generic picture of the product on a page displaying various similar products. More links may be used on the page displaying the data to obtain additional detail.

Third full paragraph of page 328:

As shown in Figure [16]67, one embodiment of the electronic commerce component of the present invention is provided for facilitating a virtual shopping transaction. First, a plurality of items, i.e. products or services, are selected from a database and displayed for purchase in operation **1600**. Preferably, the items are displayed in an electronic catalog format. Next, in operation **1602**, a user is allowed to select a predetermined set of the items for purchase. For example, each of the items could include a liked picture or text, which a user would then simply click on with a mouse pointer to select the items. Other options include scrollable menus, etc. In operation **1604**, a payment is then accepted in exchange for the predetermined set of items. Such

predetermined set of items is then stored in operation **1606**, thereby allowing the user to collectively select the predetermined set of items at a later time without having to select each of the items individually. Note operation **1608**. The selected items are preferably stored in a database unique to the user. The set of items selected during each shopping session should be stored in a separate listing or file so that the user can individually select particular sets of items. Optionally, the user may be allowed to name each stored set of items for easier identification later. The user may also be permitted to rate or rank the items of a selected set for purposes of refreshing the user's memory when the user later retrieves the set.

First full paragraph of page 332:

One embodiment of the present invention provides for comparison shopping by utilizing the customer's profile to prioritize the features of a group of similar, competing products, as shown in operation **1504** of Figure [**15**]66. The competing products may or may not have been manufactured by competing business entities. More detail is provided in Figure [**16A**]68 First, in operation **1610**, a customer's profile is developed. This profile may be developed from many sources including customer input, customer buying habits, customer income level, customer searching habits, customer profession, customer education level, customer's purpose of the pending sale, customer's shopping habits, etc. Such information may be input directly by the user, captured as a user uses the network, and may be downloaded periodically from a user's system. Next, in operation **1611**, a plurality of items for purchase are displayed, from which the customer is allowed to select multiple, similar items, i.e. products or services to compare in operation **1612**. Then, after a set of features of each item is determined in operation **1613**, operation **1614** creates a hierarchy of the features of the items selected in accordance with the customer's profile. For example, as shown in Figure [**16B**]69, a comparison of features based on keywords taken from the customer's profile may be performed in operation **1621**. The features would be preassociated with feature keywords in operation **1620**. When a keyword input by the user matches a feature keyword, the feature is given priority in operation **1622**. Features with feature keywords having multiple matches are given highest priority and ranked according to the number of matches in operation **1623**. If no keywords match, the user's words could be analyzed using a thesaurus to find keyword matches, but these would be given lower priority in operation **1624**. Then, in operation **1615** of Figure [**16A**]68, a comparison table is presented with the

features organized in a prioritized manner in accordance with the hierarchy. A particular item may be chosen, and similar competing items would be compared to it. For example, the prices of a service may be compared to the prices of other similar services. The advantages of selected items could also be highlighted against similar competing and noncompeting items.

Seventh full paragraph of page 333:

With reference now to operation **1506** of Figure [15]66, another embodiment of the electronic commerce component of the present invention is provided for facilitating a virtual shopping transaction by ascertaining needs of a user. A more detailed description is shown in Figure [17]70. First, needs and requirements of a user are input by the user. Then the needs and requirements are analyzed in operation **1702**. Available products are reviewed in Figure **1704** and placed on a list from which one or more items will be selected based on the user input. Next, in operation **1706**, a solution is generated based on the requirements of the user after which the solution is displayed, as indicated in operation **1708**. Figure [17A]71 provides an example of operation **1706**. The items would be preassociated with keywords in operation **1720**. In operation **1721**, selection of items based on keyword taken from the user input may be performed. When a keyword input by the user matches a keyword associated with an item, the item is displayed in operation **1722**. If no keywords match, the user's words could be analyzed using a thesaurus to find keyword matches in operation **1723**. A payment is then accepted in exchange for the solution in operation **1710** of Figure [17]70, as will be discussed in more detail below. It should be noted that in the present description, the solution includes either a product or a service, or both.

Eighth full paragraph of page 334:

In still yet another embodiment, a method, system, and article of manufacture is provided for allowing a user to customize an item for purchase in a virtual shopping environment, as shown in Figure [15]66, operation **1508**. Figure [18]72 provides more detail. Referring to Figure [18]72, a plurality of items for purchase are first displayed in operation **1802**, as discussed above. Each of the items includes a plurality of available features which are displayed in operation **1803**, preferably with the price of each feature, including cost for adding the feature and cost savings for removing the feature. Next, a user is permitted to select the available features of each of the

items to be purchased, as indicated in operation **1804**. For example, a user may indicate which features of the item the user wants to be included with the item and which items the user wishes absent or removed. If the item is a product, an illustration or picture of the product with only the selected features should be made available so that the user can see the product in various configurations. As an option, a total price and availability may be determined with respect to the selected items and the selected features thereof for display purposes in operation **1806**. Further, in operation **1808**, payment is accepted in exchange for the selected items and the selected features thereof. It should be noted that in the foregoing description, the items each include either a product or a service or both, and may also include third party products and services.

Last paragraph of page 346-first paragraph of page 347:

One embodiment of the electronic commerce component of the present invention is adapted for advertising in a virtual shopping environment in operation **1510** of Figure [15]66. Figure [19]73 illustrates the operation in more detail. In operation **1902**, a plurality of items, i.e. products or services, are displayed for purchase. Along with the items being displayed for purchase, or on a subsequent page or pages, advertisement information which relates to at least one of the items displayed for purchase are displayed in operation **1903**. Figure [19A]74 provides more detail of operation **1903**. The advertisements are preferably preassociated with individual items or may be associated with an entire classes of items in operation **1910**. When the items are selected for display, one or more of the advertisements is automatically displayed as well in operation **1911**. In operation **1912**, if there are many advertisements, the advertisements are rotated so that each gets an equal amount of display time, or according to the premium paid by the advertiser. A user is permitted to select the items for purchase, as indicated by operation **1904**. Payment is then accepted in exchange for the selected items in operation **1905**. While the virtual shopping environment is being used, advertisement information may be displayed which relates to at least one of the items for purchase and also relates to the user based on the profile of the user. This is particularly useful where the advertisements are being rotated. Then the advertiser would be billed based upon the number of times its advertisement was shown Note that the items each include at least one of a product and a service.

Thirteenth full paragraph of page 349:

Next provided is a method, system, and article of manufacture for selectively determining prices and availability of items, i.e. products or services, for purchase in a virtual shopping environment based on a user profile, as performed by operation **1512** of Figure [15]66. Figure [20] 75 illustrates the operation in more detail. As shown in Figure [20]75, in operation **2002**, a user profile is created from input about a user. The user profile is preferably created in a manner that predicts buying tendencies. The virtual shopping environment is tailored automatically based on the user profile. A plurality of items (i.e., products or services) for purchase are displayed, as discussed above. One example would be selecting at least one item for purchase based on the profile of the user in operation **2004** and displaying those items before other items in operation **2006**. For example, the items may be placed in groups, the groups being based on estimated buying tendencies. Then, items from the group most closely matching the user's buying tendency, as determined above, are displayed. Further, the user is allowed to select the items for purchase in operation **2008**. Factors that are tailored include price and availability of the items. Payment is then accepted in exchange for the selected items in operation **2010**, as discussed in more detail below.

Fifth full paragraph of page 352:

Referring to operation **1514** of Figure [15]66, another embodiment of the electronic commerce component of the present invention receives an order for at least one of the products and services. User information is collected for order processing, including an address for delivery and billing. In the alternative, a user may enter an alphanumeric code representative of a source of currency, such as a credit card number or bank account number. Optionally, the user may be allowed to select a shipping provider other than a default provider. The availability of the desired product is confirmed, as are the price and shipping arrangements. As an option, the invention may require the user to confirm that the desired product or service has been ordered, that the price is satisfactory, and that the desired shipping provider is selected.

Fifth full paragraph of page 353:

As shown in Figure [15]66, operation **1516** calculates at least one of a tax and a shipping fee for at least one of the items, i.e., products and services, for which the order is received. The tax cost

for each order is calculated, and may include a listing of the tax per item. The shipping costs for each item or order may also be calculated, such as by taking into account handling costs, the total weight of the items, the distance to final destination of the items, and the corresponding charges of the shipping provider. An estimate of the delivery date may also be given. It should be noted that mileage and the like could be calculated where services are to be rendered at a location remote to the provider.

Last paragraph of page 356-first paragraph of page 357:

As shown in Figure [21]76, a method, system, and article of manufacture is provided for automatically generating a contract between an owner of software and a user of the software. First, in operation **2102**, a user is allowed to request to utilize a software package after which user input relating to the user is requested and received. See operation **2104** and **2106,** respectively. Such information may include identification information such as name, address, etc. In operation **2108**, a tailored license agreement is then generated by utilizing the user input. Figure [21A]77 illustrates a procedure for performing operation **2108**. In operation **2110**, the terms of the license agreement are set forth. Licensor identification information is included in operation **2111**. Licensee (user) identification information is set forth in operation **2112**. Optionally, verification of identification may be performed in operation **2113**, such as prompting a user to enter his or her telephone number and cross referencing the input number with telephone listings.

Last paragraph of page 367-first paragraph of page 368:

Referring to operation **1518** of Figure [15]66, a status of delivery is output for at least one of the products and services for which the order is received. The order status of a desired order may be checked in real time, especially useful when products are backordered or services have been delayed. Once the items have been shipped, the shipping status may be provided, such as by requesting that the user input a tracking number and retrieving data concerning that number from the shipping provider and displaying the result. Further, the status of an invoice may be checked in real time for, for example, permitting a user to determine whether a payment has been received and the like.

First full paragraph of page 376:

As illustrated in Figure [14]65 and denoted by reference numeral **1402**, another embodiment of the present invention is provided for affording a combination of content channel-related web application services. More detail is given in Figure [22]78. Various features are included such as downloading data in operation **2200** and transmitting data, such as push-technology data, based on user specifications in operation **2202**. In operation **2204**, a plurality of newsgroups are also provided to which users may subscribe. Content subscriptions are also available. Answers are provided to frequently asked questions (FAQ's) relating to the content-related web application services. See operation **2206**. Further, in operation **2208**, real time communications are enabled between a plurality of users. In use, the transmission of outgoing electronic mail is coordinated and targeted in operation **2210** while incoming electronic mail is manage and organized in operation **2212**. A plurality of templates are provided for publishing data in various forms in operation **2214**.

First full paragraph of page 377:

The present invention includes several download capabilities. See operation **2200** of Figure [22]78. A common process is used for all downloads. Selected files may be downloaded securely and the success of file downloads are tracked. If an error occurs during downloading, the download is restarted. These features greatly facilitate transactional dependent downloads.

Eighth full paragraph of page 377:

Referring to operation **2202** of Figure [22]78, push-technology data is transmitted based on user specifications. Preselected messages and content may be sent to customers proactively. Furthermore, applications could be received, installed, and launched automatically without user intervention. For example, a software update could be automatically sent to a user's computer and installed immediately when it becomes available. Also, informal hardware and software audits could be performed automatically or at predetermined intervals.

Second full paragraph of page 378:

Operation **2204** of Figure [22]78 provides for a plurality of newsgroups to which users can subscribe. Sending and receipt of all media types, including graphics, audio, streaming video,

and the like is permitted. A user may also participate in discussions via email. Selected users or an administrator may also be allowed to moderate a forum discussion as well as limit and control membership in a group.

First full paragraph of page 379:

Referring to operation **2206** of Figure [**22**]**78**, the content channels component of the present invention would also include a component for displaying static answers to popular questions. The questions and answers could be dynamically generated from a knowledge base. Optionally, the questions and answers could be ranked in order from the most to the least viewed or vice versa or could be organized by topic. Also optionally, a search engine could select relevant questions based on a user's input criteria.

Eighth full paragraph of page 379:

Chat capabilities could be included in the content channels component of the present invention. Note operation **2208** of Figure [**22**]**78**. Such capabilities would permit collaborative web touring and URL pasting, for such things as permitting two or more users to simultaneously navigate the web. The invention may notify a user when another user is online. Further, chat rooms could be dynamically created which could restrict access to known users or could permit open public access. Moderated chat sessions would also be allowed. Optionally, the chat capabilities could permit posting and retrieving of public and private messages, such as on electronic bulletin boards.

Last paragraph of page 379:

In operation **2210**, shown in Figure [**22**]**78**, the content channels component of the present invention also permits generation of messages which may be sent to selected users at predetermined times or automatically upon occurrence of a particular event. The users may sign up to receive the messages, or they may be selected based on user profiles or a category system. All outbound messages are logged and tracked, as are any responses to those messages.

Seventh full paragraph of page 380:

Inbound e-mail is managed in operation **2212** of Figure [22]78. All incoming messages are logged, tracked, sorted based on text patterns, and routed to the appropriate destination. For some messages, automated responses may be sent. Other messages would be queued in mailboxes for response. All or selected messages may be stored to build a customer interaction history.

Twelfth full paragraph of page 380:

The content channels component of the present invention also provides for generic and custom template based publishing by displaying selected content and applications based on the profile of a user. Note operation **2214** of Figure [22]78. Content is obtained from multiple data sources, including static, database, and third party sites. Optionally, the content may be matched to particular users via configurable business rules.

Seventh full paragraph of page 381:

Another embodiment of the present invention is provided for affording a combination of web application services to manage administration of the web application services. See component **1404** of Figure [14]65. To accomplish this, information on employment opportunities is managed and organized. Further, information relating to the stock markets and corporate financial information is output. Information on legal services is also provided.

Sixth full paragraph of page 382:

As shown in component **1406** of Figure [14]65, one embodiment of the present invention is provided for affording a combination of web application services to manage customer relationships. Figure [23]79 illustrates component **1406** in more detail. As shown in Figure [23]79, profile data of a plurality of users is managed and organized in operation **2300**. Static and dynamic information of interest is provided to each user based on profile data of that user in operation 2302[2304]. Further, static and dynamic information of interest is provided to a plurality of users having similar profile data in operation **2304**. Information is also located on a network of databases, i.e. the Internet, as a function of the profile data. Feedback is also collected from the users by way of electronic forms and surveys Note operation **2306**. Various

event, calendaring and registration services are further provided. For example, operation **2308** reminds the users of upcoming events, a calendar of events is maintained, and the users are permitted to register for the events.

Last paragraph of page 382-first paragraph of page 383:

One embodiment of the present invention is provided for utilizing all user indicia for the purpose of customizing a user interface. Note operation **2300** of Figure [**23**]79. In use, a user profile is developed in operation **2310** of Figure [**23A**]80. Such user indicia may include any of search requests, products purchased, products looked at but not purchased, products purchased and returned, reasons for returning products, customer stated profile including income level, education level, stated profession, etc. as well as preferences of the user. Figure [**23B**]81 illustrates one method for developing a user profile. In operation **2320**, user information such as search requests, shopping events, and browsing habits may be collected by the system or by the user's computer for periodic download to the system. All of the user information would be placed in a database in operation **2321** for retrieval when necessary. Thus, a user's buying pattern for a particular type of item can be readily estimated with relative surety in operation **2322** each time a user uses the system. Further, the user's current activities can be logged and entered into the database in operation **2323**, thereby ensuring up to the minute accuracy. In operation **2311**, an item for purchase with a set of features is selected based on the user profile and is displayed. The item may be selected from a group of items having characteristics that corresponds to a predicted buying pattern of the user. The presentation of the set of features is customized based on the user profile in operation **2312**. For example, the features are The user is allowed to select the item for purchase. See operation 2313[**2314**].

First paragraph of page 384:

The customer relationship management component of the present invention permits matching of web content and advertisements to specific user profiles. Note operation **2304** of Figure [**23**]79. Personalized recommendations are made based on the profile of a user. Cross- and up-selling of products to users based on their profiles is also permitted. Optionally, content matching rules are defined by configurable business rules. In the alternative, metadata and business rules match

content to profiles. Also optionally, legacy databases and information may be related to personal profile information.

Seventh full paragraph of page 385:

Referring to operations **2308**, **2310**, and **2312** of [Figure **23**] Figures **79 and 80**, the customer relationship management component of the present invention includes a calendar of events, a notification service, and a way to register for upcoming events. Relevant events are selected based on the profile of a user and the user is notified of the time and place of the event. Once the identity of a user has been verified, the registration of the user is accepted. A notice is sent to a user to remind the user of the event for which he or she has registered. The registration function is integrated with commerce functions to permit fee-based registration capabilities, such as permitting online registration via credit card.

First full paragraph of page 386:

One embodiment of the present invention, illustrated in Figure [**14**]**65** as component **1408**, is provided for affording a combination of content management and publishing-related web application services. In use, referring to Figure [**24**]**82**, content of a data interface, i.e. a web-site, may be developed for accessing data on a network, i.e. the Internet, after which such content is managed in operation. Note operations **2400** and **2402**, respectively. Publishing of the content of the data interface is controlled by precluding transmission or publication of the content until approval in operation **2404**. The content of the data interface may also be tested in operation **2406**. For example, this may be accomplished by creating a staging and deployment environment in which the data interface is analyzed. Further features include "text-only" rendering and content workflow control.

First full paragraph of page 398:

The content management and publishing services component of the present invention also manages the content and security of the data interface. Note operation **2402** of Figure [**24**]**82**. Current files are stored along with past changes to documents, source code, and web content. User specific and project specific authorization is assigned to ensure secure administration. File

changes among multiple users are reconciled so that accidental code overwriting is avoided. Site maps are generated and metadata is maintained for content.

Second full paragraph of page 400:

The content management and publishing services component also includes localization and translation capabilities[in operation **2408**]. Site updates and maintenance procedures for localization are enabled, and the localization process is tracked. The local web site content manager is alerted to any change in the web site. Also, translation services are provided for single pages to entire web sites. For example, the translation services translate text embedded in images, JAVA, JAVASCRIPT source code and parameters, CGI scripts, database files, email, and ADOBE PDF files to and from each other.

First full paragraph of page 401:

One embodiment of the present invention is provided for affording a combination of education-related web application services, illustrated as component **1410** of Figure **14**. Figure [**25**]**83** provides more detail. In operations **2500** and **2502** respectively, a curriculum of course offerings is generated from which users are permitted to select, i.e. order, register, etc. Education such as training or the like is carried out over a network such as the Internet in operation **2504**. At any given time, a status of the education may be provided, including such things as a listing of the courses completed, scores for the courses completed, a listing of courses for which currently enrolled and the current scores in those courses, a listing of courses required to matriculate, etc. Note operation **2506**.

Fifth full paragraph of page 421

In terms of verbal information, internal requirements are that the learner have a good mastery of linguistic rules and vocabulary in order to understand statements presented, and he or she must also have previously existing "cognitive structures" (Gagne, 1977, p. 40), or structures of meaningfully organized information which will give meaning and context to the new material presented.

Last paragraph of page 421 to first paragraph of page 422

One external condition is stimulation of the appropriate cognitive structure (usually in the form of an advance organizer). Another is informing the learner of the objective of the learning; this focuses the learner's attention. A third may be repeated hearing or reading of an informational passage; most modern theories concur that more information is assimilated with each repetition (Gagne, 1977, p. 40).

Second full paragraph of page 423

Attitudes are expressed behaviorally; therefore one internal condition for learning new attitudes is that the learner must have mastered whatever skills or knowledge the behavior requires (e.g., knowledge of the rules in order to enjoy playing chess, etc.) Another internal condition is that the learner must have admiration and respect for people who are seen doing the behavior; this is called "human [modelling] modeling" (Gagne, 1977, p. 46.) The only external conditions which seem to be effective are that either the learner himself or a human model experiences the effects of an action as "good" or "bad."

Last paragraph of page 430-first paragraph of page 431:

One embodiment of the present invention is provided for automatically generating a student educational curriculum. See Figure [**25A**]**84.** First, in operation **2510**, educational program offerings are displayed, which a student is allowed to review. Next, in operation **2511**, the student is prompted to define his current expertise by completing a student profile (user indicia), which is received by the invention in operation **2512** and used to generate a user profile in operation **2513**. Referring to Figure [**25B**]**85**, for example, the student profile may define a current expertise. The education curriculum would be generated based on the current expertise in operation **2520**. Then, the student defines his training goal, such as a specific certification or degree (additional user indicia), which is received in operation **2521**. Or the training goal may be taken from the student profile in operation **2522**. The education curriculum is generated to fulfill the training goal in operation **2523**. The student's progress is monitored and revised educational curriculums are produced, when necessary, in operation **2524** based on the monitored progress. Finally, an education curriculum based on the user profile is generated in operation **2514** of Figure [**25A**]**84**.

Eighth full paragraph of page 431:

Users may order and register for any educational offering on an interactive interface through operation **2502** of Figure [**25**]**83**. Examples of offerings may include third party training and online training. The interactive interface may be integrated with the commerce component to permit transactional processing when placing an order. For example, a user may sign up for an offered course and pay the tuition by credit card. Alternatively, the commerce component could create a payment schedule which requires that payments be made periodically. Optionally, the registration and ordering components are able to integrate with third party service providers' systems.

Last paragraph of page 431-first paragraph of page 432:

The education related services component of the present invention educates users over a network such as a LAN, WAN, an intranet, the internet, etc. Note operation **2504** of Figure [**25**]**83**. Courses may be taken live, directly from a server, or downloaded to the workstation of a user. Bulletins relating to the courses could be posted on electronic bulleting boards or electronically mailed to individual students. Tests may also be offered over individual courses as well as entire curriculum.

Last full paragraph of page 432:

Referring to component **1412** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a combination of customer-related web application services to support a product. More detail is provided in Figure [**26**]**86**. In operation **2600**, a user is allowed to register the product. Further, on-line support information is provided about the product. Such support information is provided based on queries. Note operation **2602**. As an option, this information may also be afforded by way of a specially managed call center. In addition, in operation **2604**, claims may be handled relating to the product. During operation **2606**, the users are automatically notified of upgrades and/or problems relating to the product. Consulting services may also be made available.

Last full paragraph of page 433:

Referring to operation **2602** of Figure [**26**]**86**, support information on a product may be searched for based on queries input by a user. Queries may be accepted in natural language format as well as by keyword. The support component may respond with additional questions relating to the matter at hand in an effort to better identify the problem. Solutions may be provided over several mediums, including links to web pages, graphics, illustrations, animations, downloadable software updates and fixes, etc. Also provided may be an online technical library with answers to common questions for quick troubleshooting. For unresolved issues, the user may be asked to create a service case which will be followed up on later by a technician.

Seventh full paragraph of page 439:

The web customer service component of the present invention lists warranties for view by a user in operation **2604** of Figure [**26**]**86**. When a user has a product that requires service or return under the warranty, the identity of the user is checked to ensure that the user has registered. The claim made by the user is then checked and compared to the warranty to ensure that the claim meet warranty criteria for the requested service or replacement. Once validated, the claim is routed to the appropriate agent.

Last paragraph of page 440-first paragraph of page 441:

One embodiment of the present invention is provided for affording proactive customer support. Registered users are automatically notified about necessary and optional upgrades. See operation **2606** of Figure [**26**]**86**. Optionally, a description of the upgrade may be included with the notification, along with recommendations about whether or not to install the upgrade. Further, registered users are automatically notified of possible problems or bugs and solutions are suggested, such as configuration changes or downloads.

First full paragraph of page 441:

Referring to Figure [**26A**]**87**, commercial offerings are displayed for a user to review in operation **2610**. The user is allowed to select from the commercial offerings in operation **2611**. In operation **2612**, the user is prompted to enter user indicia, which is received in operation **2613**. The sale is completed and the commercial offerings are delivered to the user in operation **2614**.

The status of the commercial offerings are monitored utilizing the user indicia in operation **2615**. In operation **2616**, the user is notified of the status of the commercial offerings. The commercial offerings include at least one of products and services.

Fifth full paragraph of page 442:

As shown in component **1414** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a combination of security-related services. Various features are included, such as permitting remote log in as well as restricting access to various resources to authorized users only. As an option, permission may need to be granted before certain activities are performed by a user or users.

Sixth full paragraph of page 442:

Referring to Figure [**27**]**88**, operation **2700** allows browser-based authentication with user verification data. In operation **2702**, access is granted to application and/or system data based on the user verification data, which may be stored in a user's browser. Virtual private networking is provided in operation **2704**.

Last full paragraph of page 454:

As shown in component **1416** of Figure [**14**]**65**, one embodiment of the present invention is provided for controlling the network and managing resources. More detail is provided in Figure [**28**]**83**. Features include caching of network content in operation **2800**, providing application proxy services the network in operation **2802**, managing resources and load balancing such as spreading tasks among servers and rerouting around problems in operation **2804**, and managing network objects in operation **2806**. Operation **2808** controls at least one of bandwidth and speed of the network. Remote log in and access is provided in operation **2810**, and affording firewall services on the network in operation **2812**.

Seventh full paragraph of page 457:

As illustrated in component **1418** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a plurality of internet-related services. Among the features included are

the actual uploading of web pages to users' computers, encrypting data for secure transmission, storing and transmitting files, processing requests and executing programs, and routing email.

Last paragraph of page 457-first paragraph of page 458:

In more detail, it is seen in Figure [29]90 that operation **2900** provides HTTP page rendering over a network framework. In operation **2902**, secure browser communication over the network framework is enabled. Electronic mail transport services over the network framework are afforded in operation **2904**. In operation **2906**, file transfer services over the network framework are provided. Information of online events is gathered and logged during online sessions over the network framework in operation **2908**. Applications may also be interfaced via predetermined protocols over the network framework. See operation **2910**.

First full paragraph of page 463:

As shown in component **1420** of Figure [14]65, one embodiment of the present invention is provided for affording a plurality of client service-related services. Referring to Figure [30]91, among the features included are managing client verification data for user authentication purposes in a network framework in operation **3000**. In operation **3002**, electronic mail capabilities in the network framework are provided. Network framework browsing in the network framework is provided in operation **3004**. File transfer capabilities in the network framework, news reader capabilities in the network framework, and chat room capabilities in the network framework are provided in operations **3006**, **3008**, and **3010**, respectively. Playback capabilities in the network framework are enabled in operation **3012**. Financial transactional capabilities in the network framework are also provided. Note operation **3014**.

Fourth full paragraph of page 464:

As illustrated in component **1424** of Figure [14]65, one embodiment of the present invention is provided for affording a combination of data-related services. Several features are included such as sorting, storing, and transferring data. As shown in Figure [31]92, in operation **3100** data access from multiple simultaneous data sources over a network framework is provided. Application data is stored over the network framework in operation **3102**.

Last paragraph of page 465-first paragraph of page 466:

As shown in component **1422** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a combination of integration capabilities-related services. Referring to Figure [**32**]**93**, it is seen that many features are provided, including integration with financial and sales systems. See operations **3200** and **3202**. Also, human resource systems may be combined over the network framework in operation **3204**. Further, integration with call centers, as in operation **3206**, and third party systems may also be included.

Last paragraph of page 468-first paragraph of page 469:

As shown in component **1426** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a combination of miscellaneous capabilities in a web architecture framework. Referring now to Figure 94, steps[Steps] included are providing locator capabilities and streaming data over the network framework in operation **3300**. Further, searching capabilities are provided over the network framework in addition to logging events and passive profiling. In operation **3302**, streaming video and/or audio data is transmitted over the network framework. Various events may be logged over the network framework. Note operation **3304**. User profile information is passively managed over the network framework in operation **3306**.

Eighth full paragraph of page 471:

As shown in component **1428** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a combination of directory-related services. In operation **3400** of Figure [**34**]**95** user profile data is validated in a system. The user profile data in the system is managed in operation **3402** and stored in operation **3404**, while network object data in the system is managed in operation **3406** and stored in operation **3408**. Community profile data may be assigned to a community including a plurality of users in the system. See operation **3410**. Community profile data is validated in the system in operation **3412**, managed in the system in operation **3414**, and stored in the system in operation **3416**.

Sixth full paragraph of page 473:

As illustrated in component **1430** of Figure [**14**]**65**, one embodiment of the present invention is provided for affording a combination of management and operation-related services. Features

include billing for usage of particular sites, monitoring site performance, creating and managing user profiles, and scheduling of operations and functions such as software updates.

Last paragraph of page 473-first paragraph of page 474:

Referring to Figure [35]96, auditing of administrative data in a system is performed in operation **3500**. Data from log files in the system is analyzed in operation **3502**. In operation **3504**, rules and policies are managed in the system. Usage in the system is audited in operation **3506** while billing for the usage in the system is performed in operation **3508**. Performance in the system is monitored in operation **3510**. Communities of users may be managed in the system. See operation **3512**. In operation **3514**, backup capabilities are provided in the system, as is network application staging in operation **3516**.

Last paragraph of page 477-first paragraph of page 478:

As shown in component **1432** of Figure [14]65, one embodiment of the present invention is provided for affording a combination of web development-related services. Various features may be included, such as development tools, utilities, and testing tools, as are provided in operation **3600** of Figure [36]97. System applications are debugged in operation **3602**. In operation **3604**, the generation of revisions of the system applications is controlled, and in operation **3606**, the operability of the system applications are tested.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claims 1, 9 and 17 have been amended as follows:

1. (Twice Amended) A method for effectively selling at least one of products and services comprising the steps of:

(a) determining an existing network framework;

(b) defining a plan for selling at least one of products and services to a target market, the plan including [which includes] improvements to the existing network framework;

(c) displaying a pictorial representation of the existing network framework and a plurality of components of the existing network framework; and

(d) indicia coding the components of the existing network framework [to which the products and services relate] that relate to products or services that are likely to be purchased by the target market in order to sell at least one of products and services relating to the components of the existing network framework, wherein the at least one of products and services are necessary to implement the improvements.

9. (Twice Amended) A computer program embodied on a computer readable medium for effectively selling at least one of products and services comprising:

(a) a code segment that determines an existing network framework;

(b) a code segment that defines a plan for selling at least one of products and services to a target market, the plan including [which includes] improvements to the existing network framework;

(c) a code segment that displays a pictorial representation of the existing network framework and a plurality of components of the existing network framework; and

(d) a code segment that indicia codes the components of the existing network framework [to which the products and services relate] that relate to products or services that are likely to be purchased by the target market in order to sell at least one of products and services relating to the components of the existing network framework, wherein the at least one of products and services are necessary to implement the improvements.

17. (Once Amended) A system for effectively selling at least one of products and services comprising:

(a) logic for determining an existing network framework;

(b) logic for defining a plan for selling at least one of products and services to a target market, the plan including [which includes] improvements to the existing network framework;

(c) logic for displaying a pictorial representation of the existing network framework and a plurality of components of the existing network framework; and

(d) logic for indicia coding the components of the existing network framework [to which the products and services relate] that relate to products or services that are likely to be purchased by the target market in order to sell at least one of products and services relating to the components of the existing network framework, wherein the at least one of products and services are necessary to implement the improvements.

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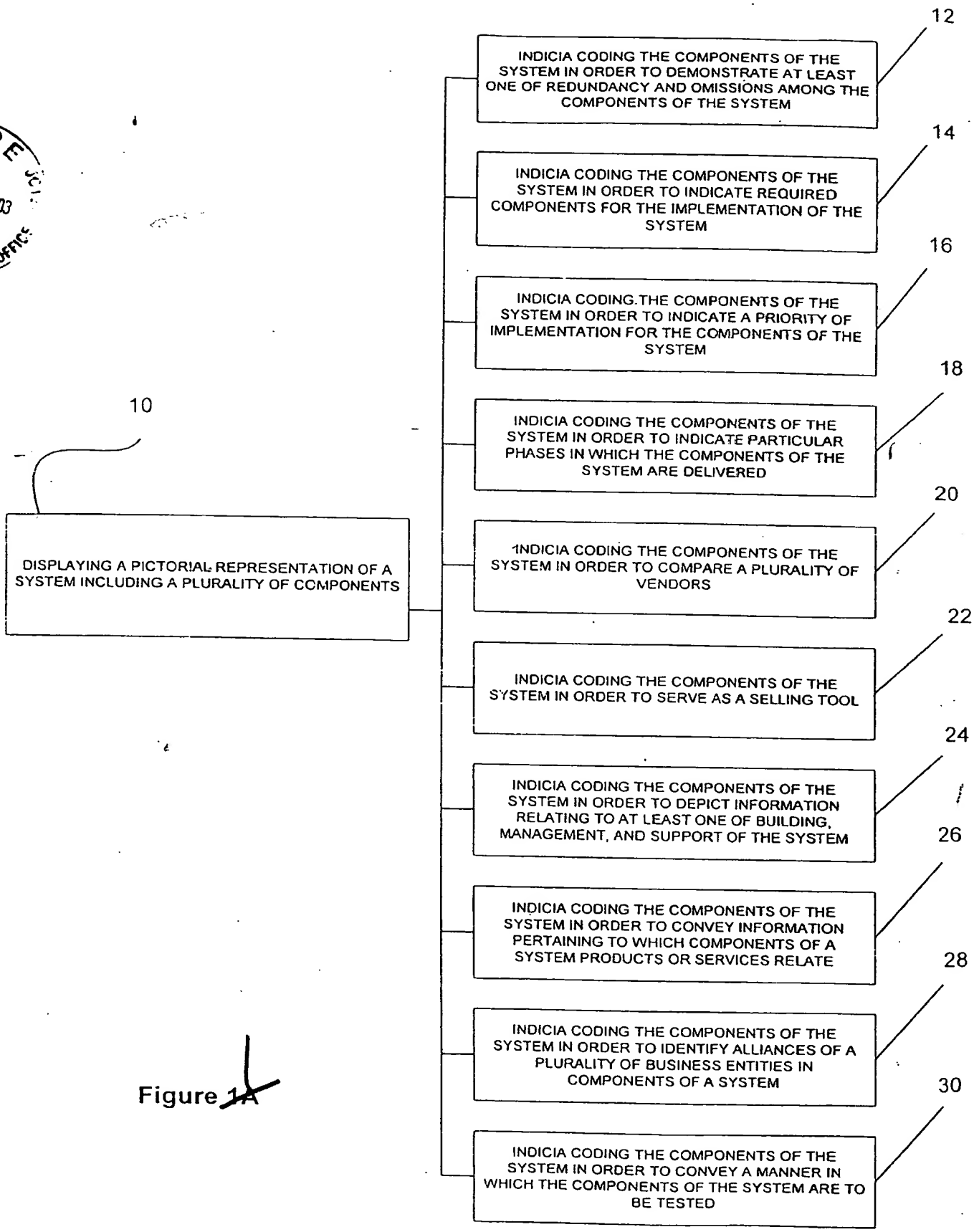

Figure ~~1A~~ 1

OIPE
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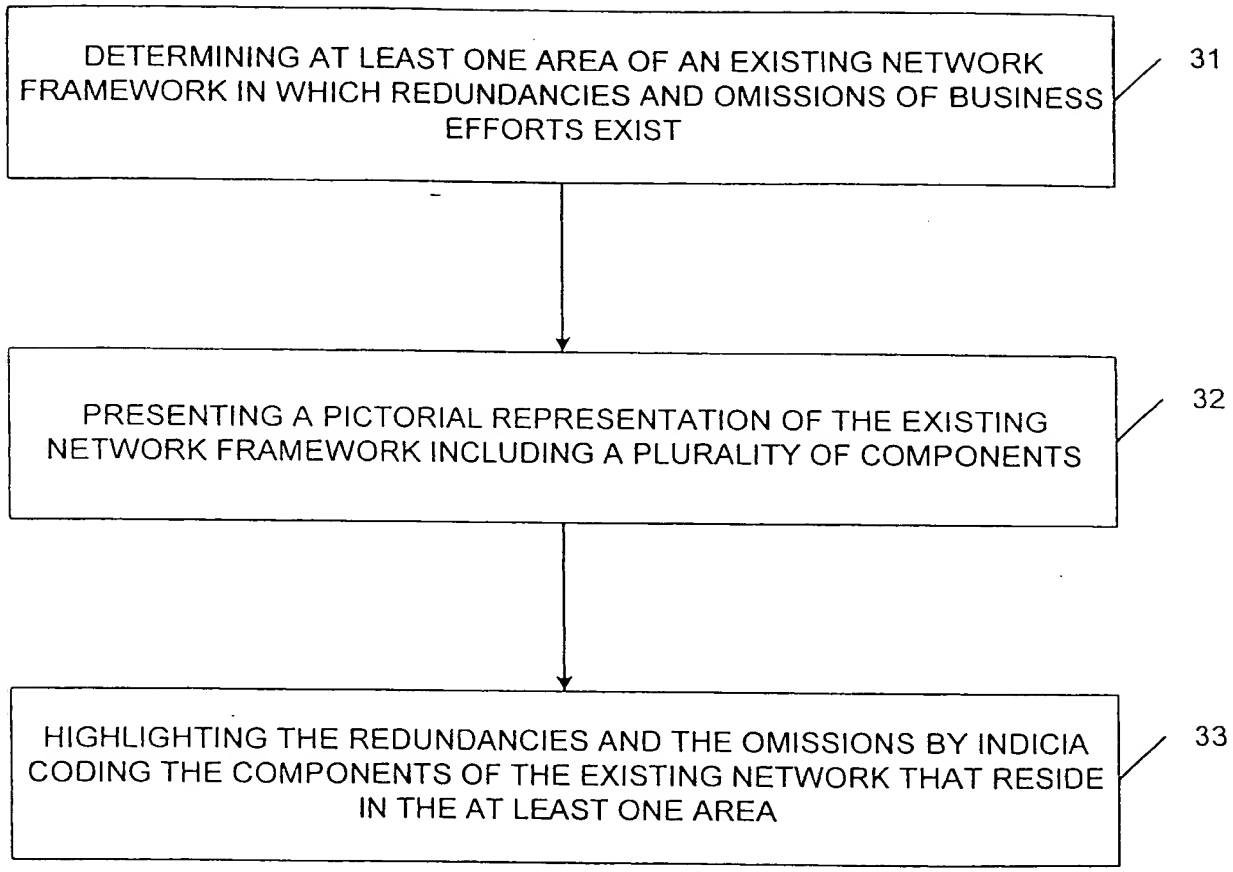

Figure 2

OIPE JC157
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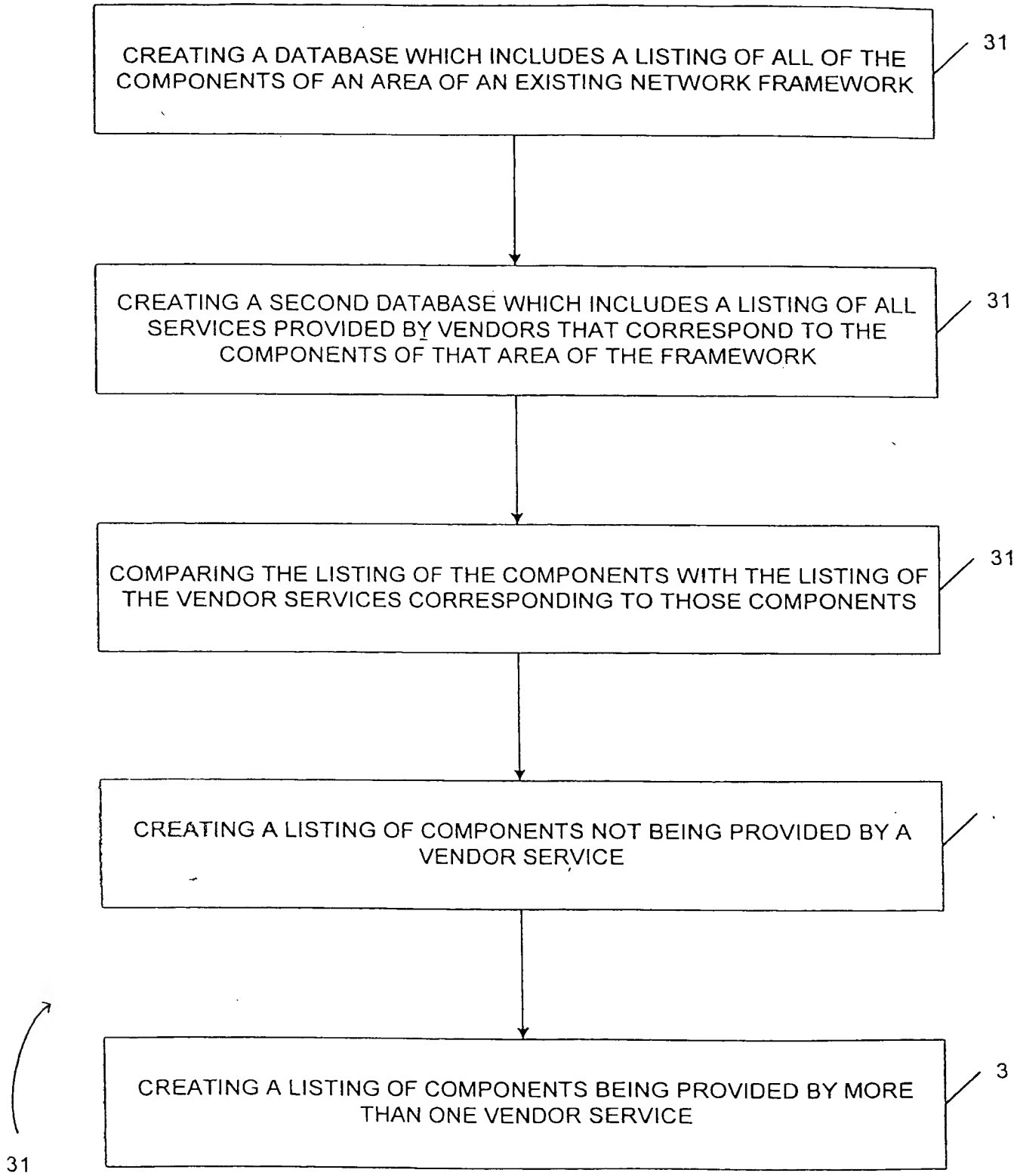
PATENT & TRADEMARK OFFICE



3

Figure ~~1B-1~~

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

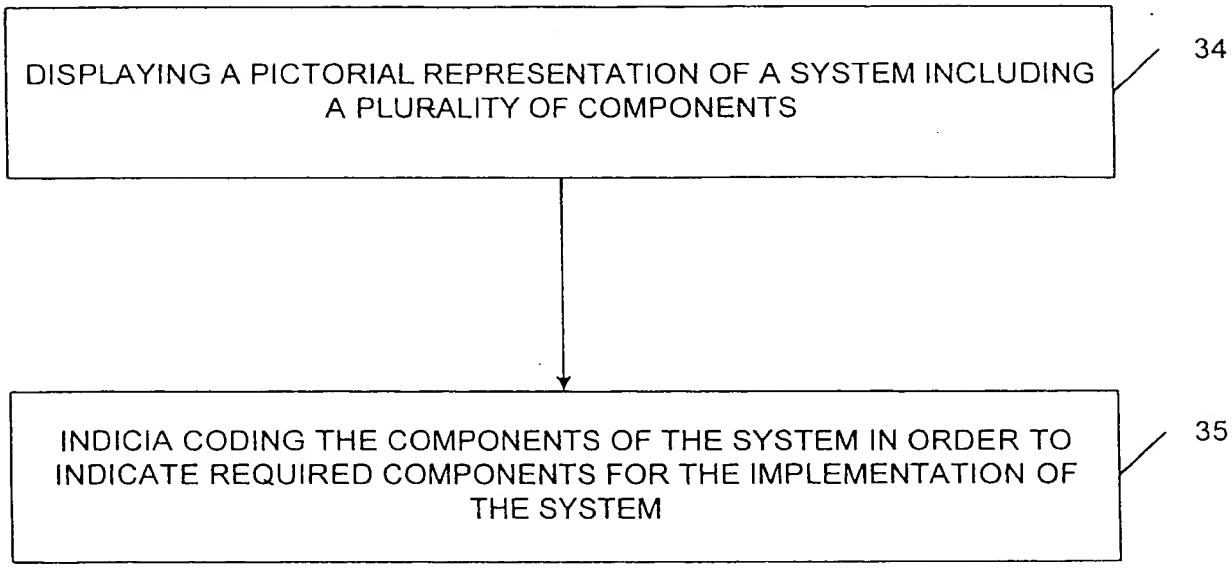


Figure 4

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK

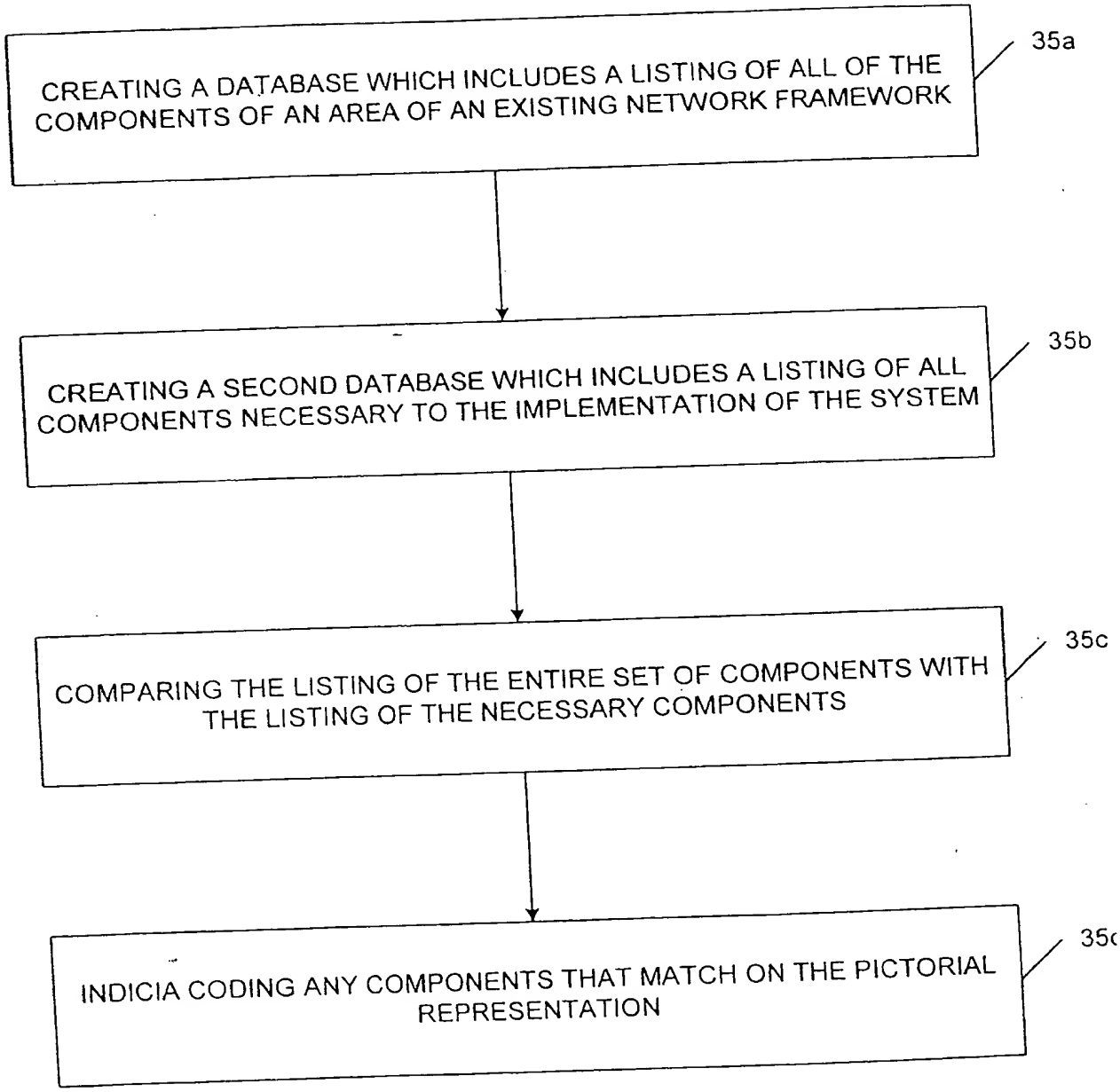


Figure ~~1C~~ 5-1

OIPE JC157
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PATENT & TRADEMARK OFFICE

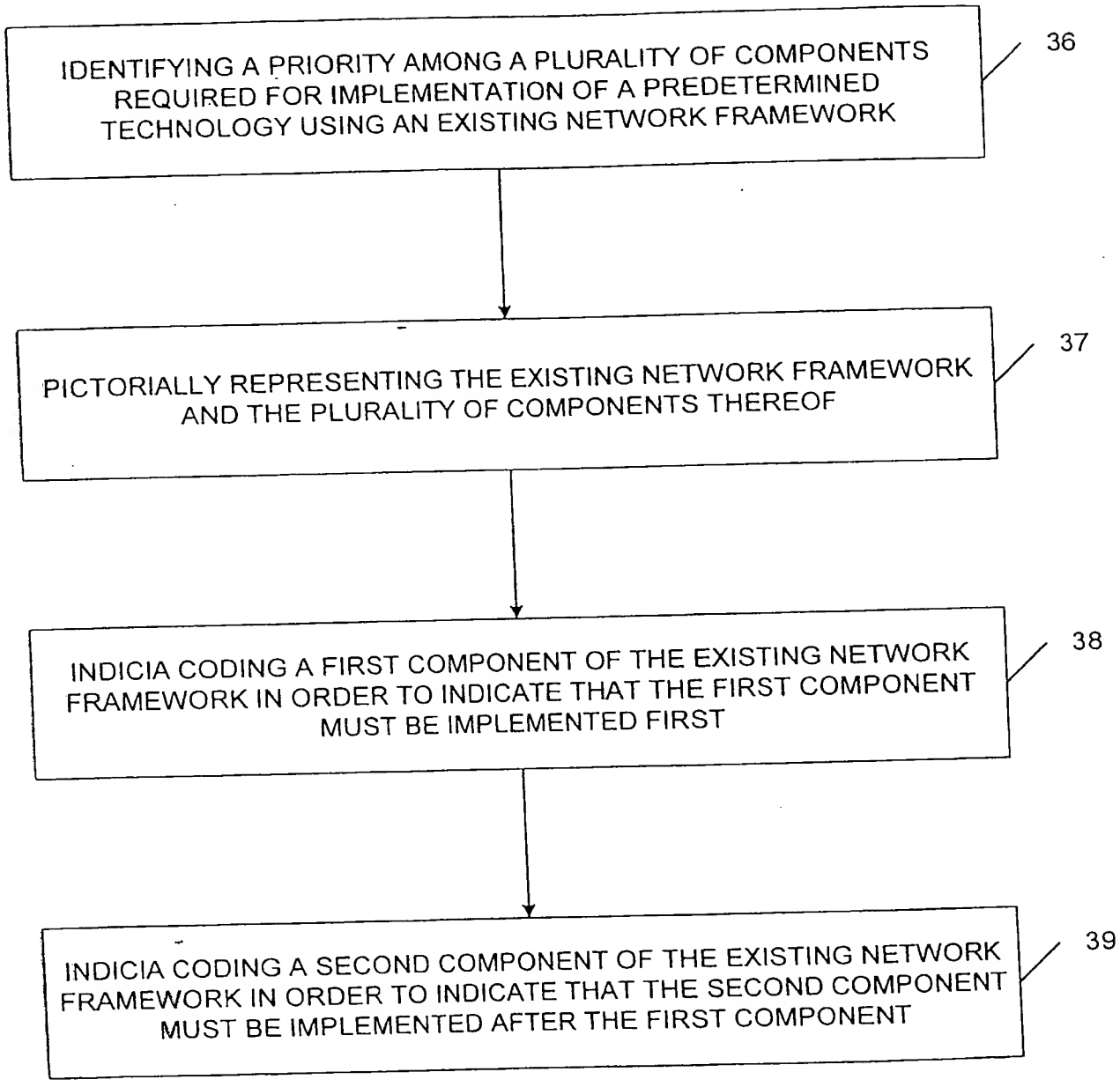

Figure 1D

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

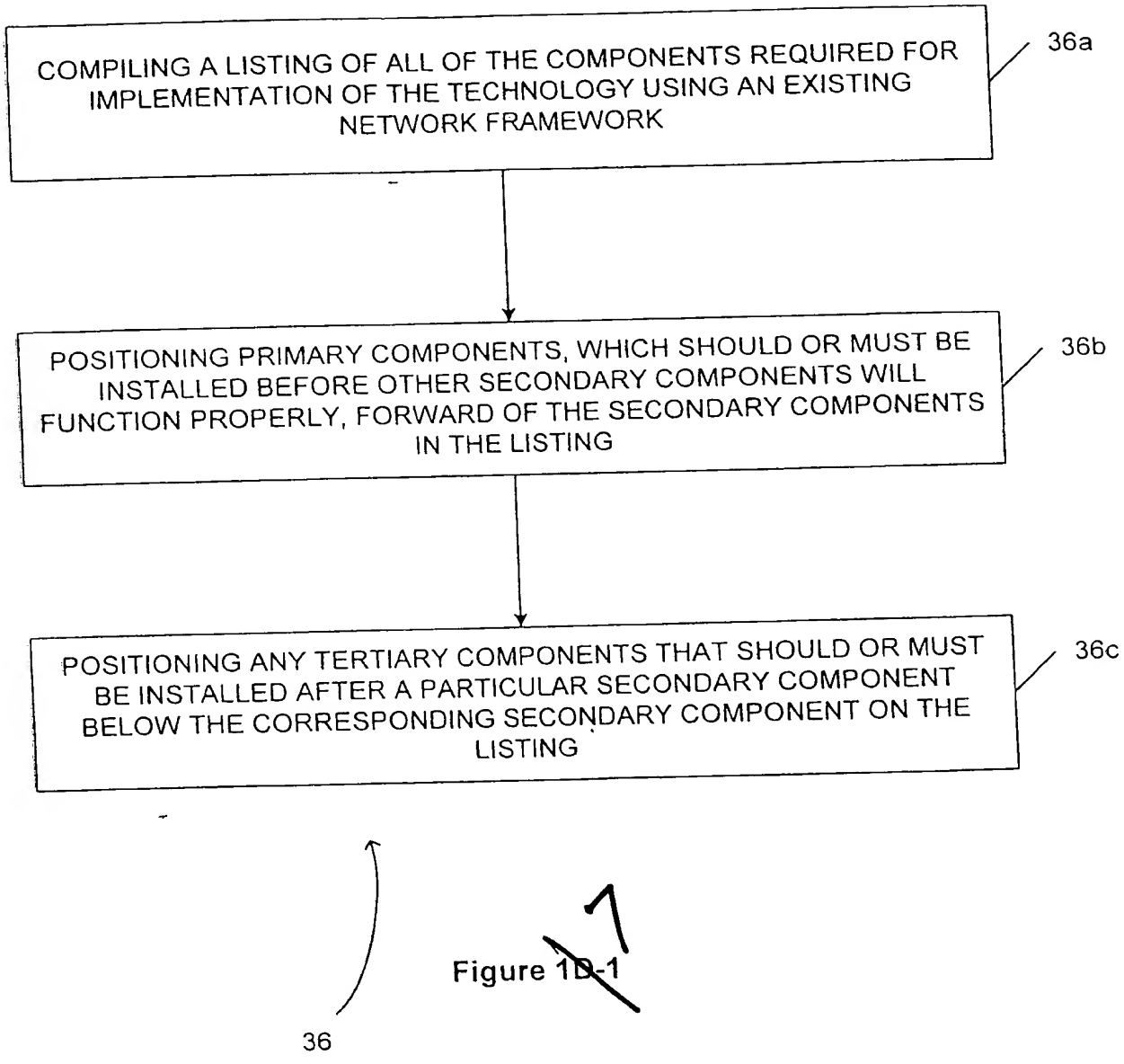

Figure 1D-1

OIPE JC157
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PATENT & TRADEMARK OFFICE

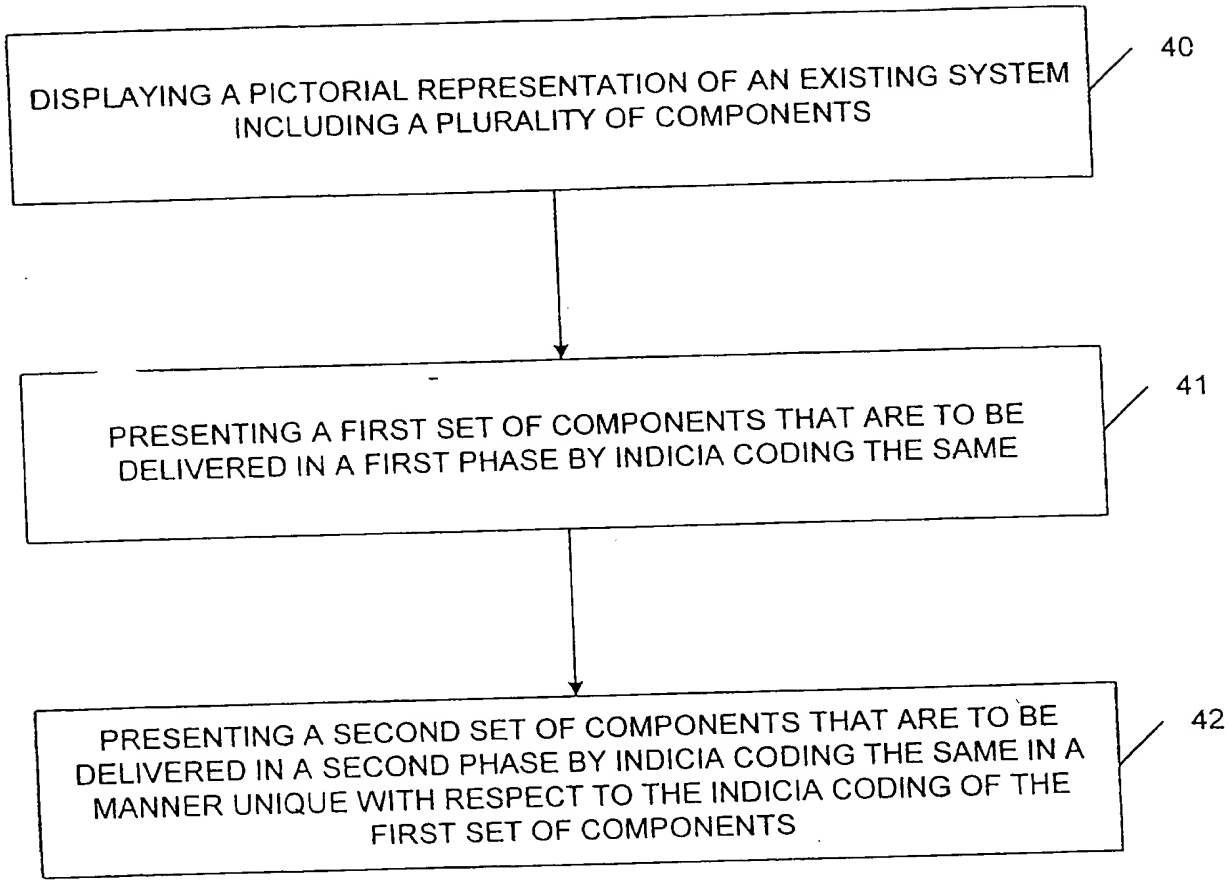

Figure 8E

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

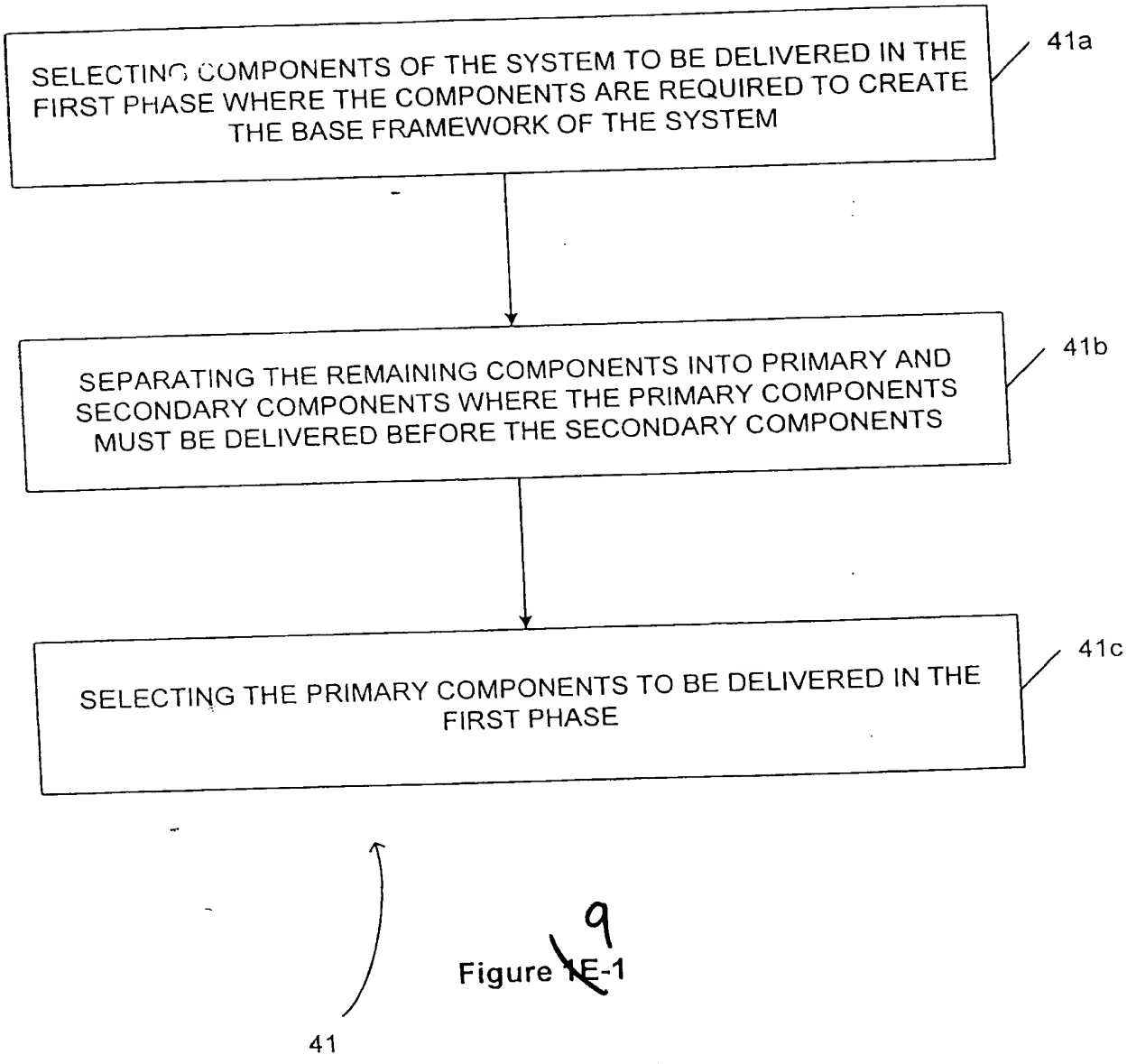

Figure 1E-1

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

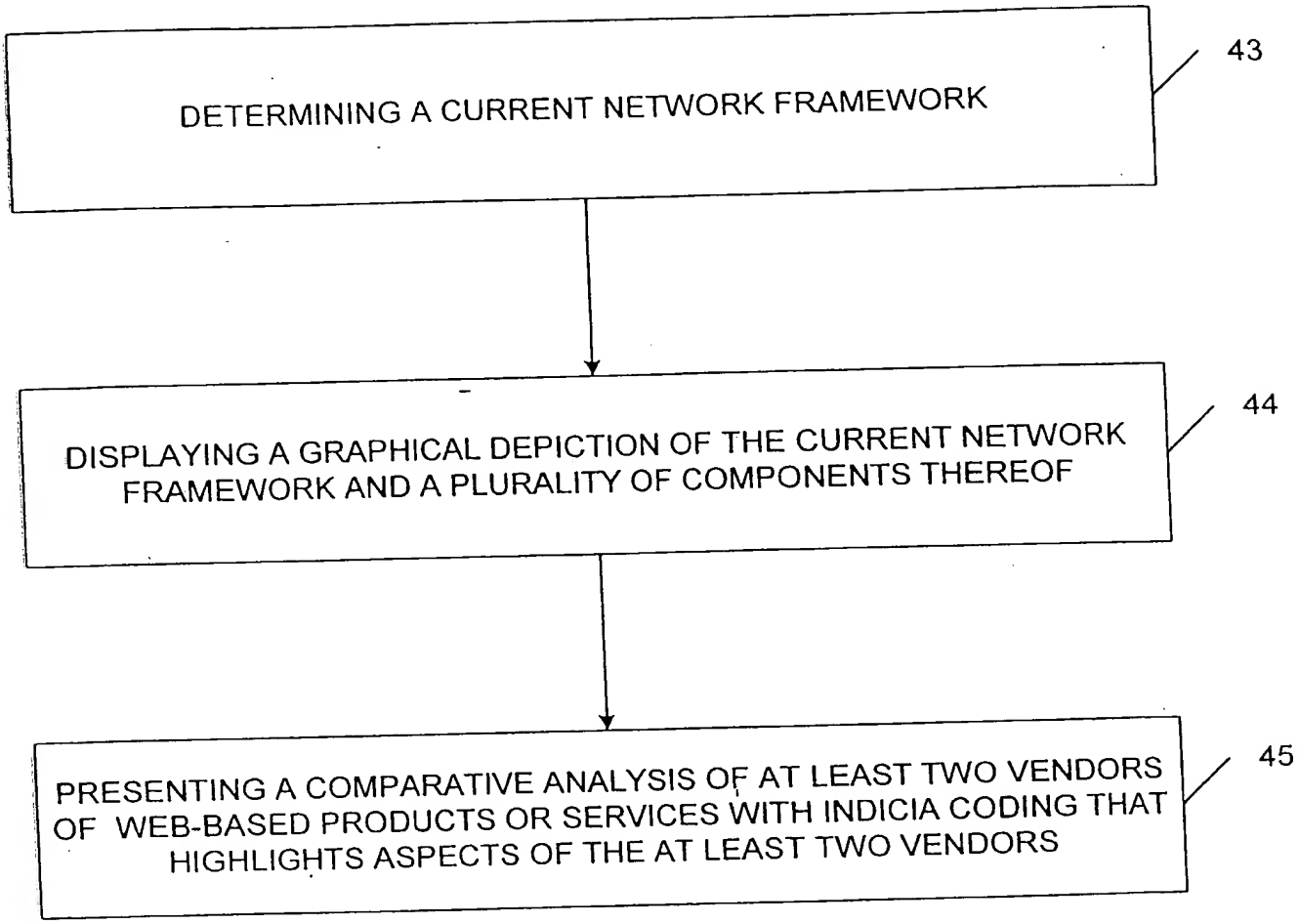

Figure 10F

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

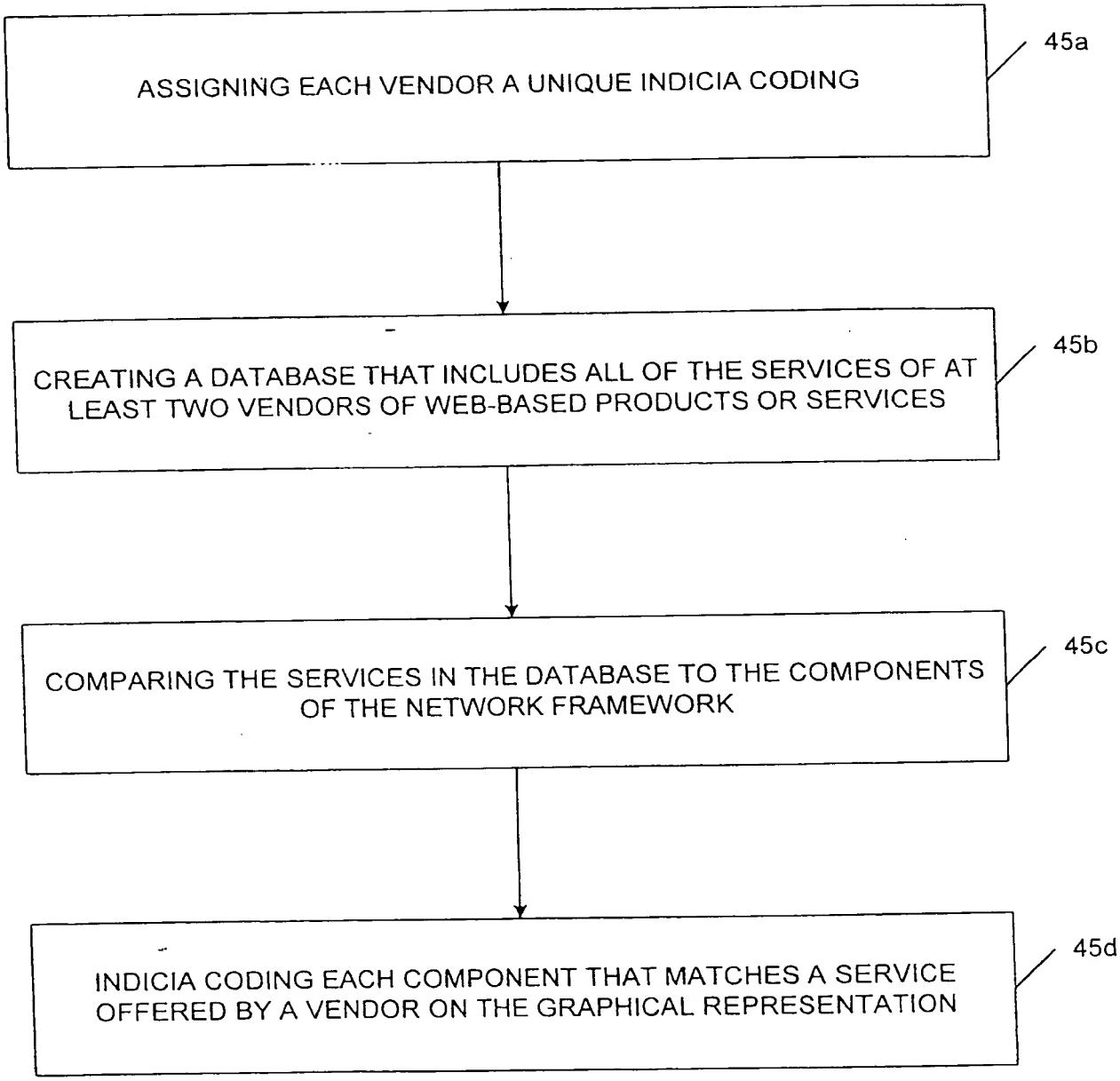

Figure 1F-1

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

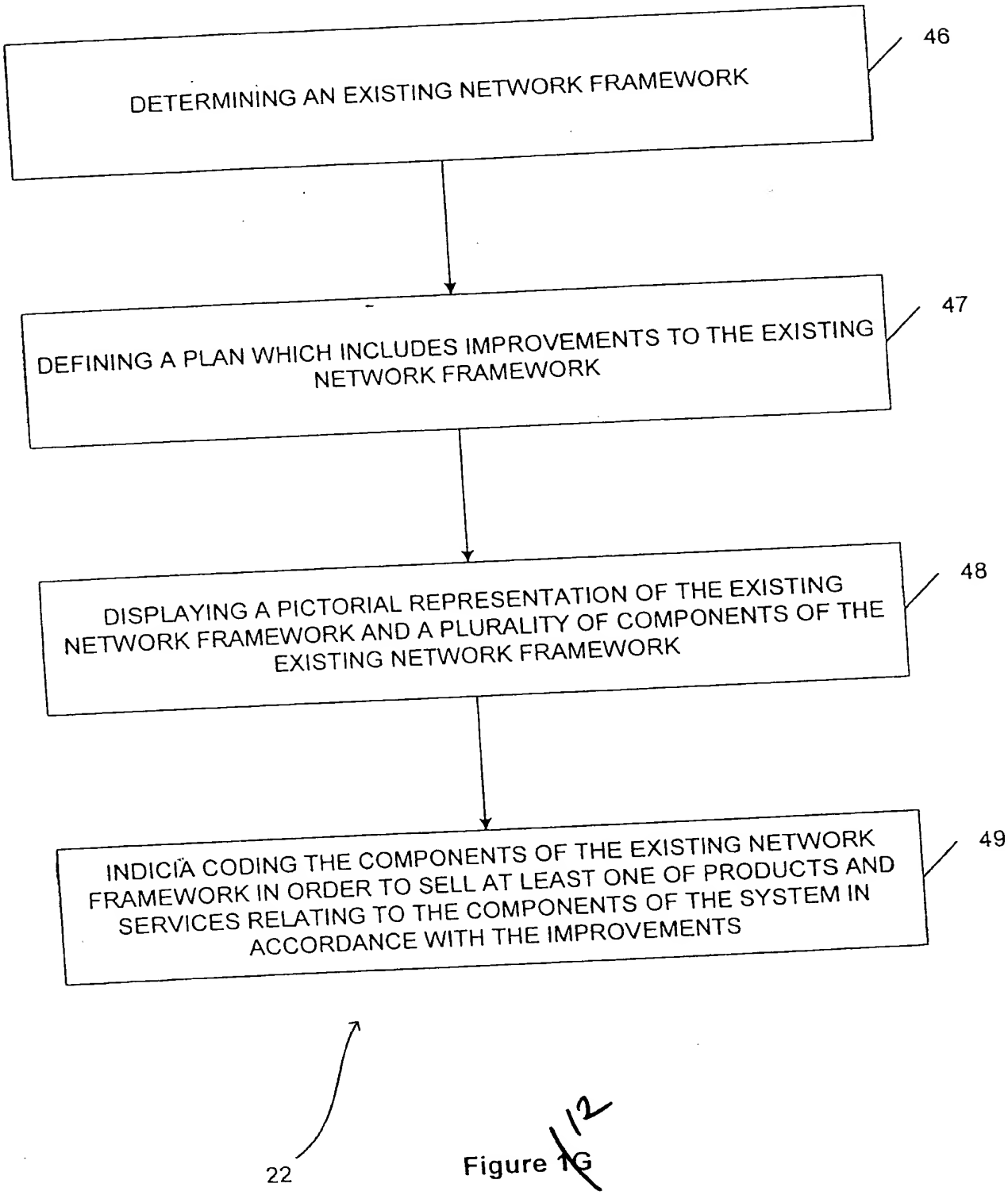

Figure 1G

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

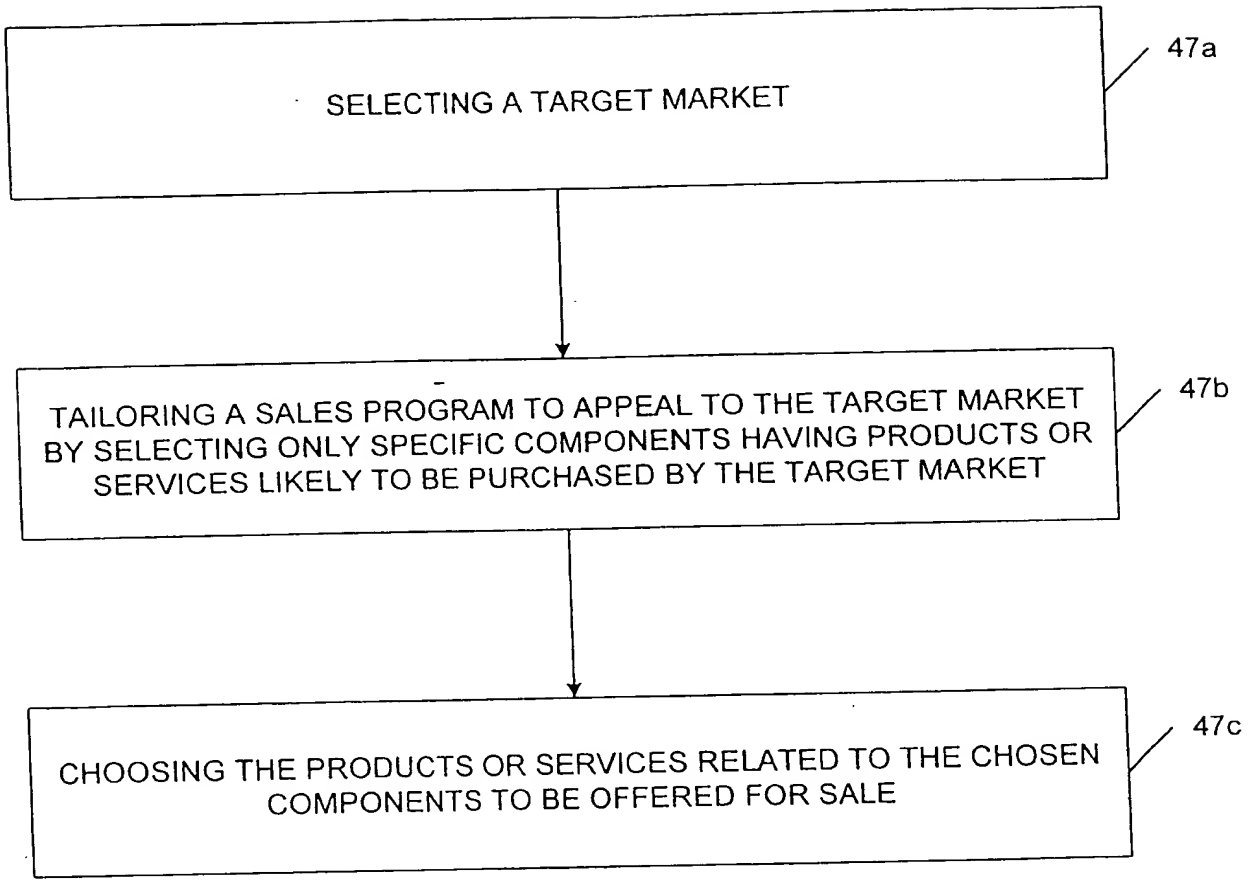

Figure 1G-1

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

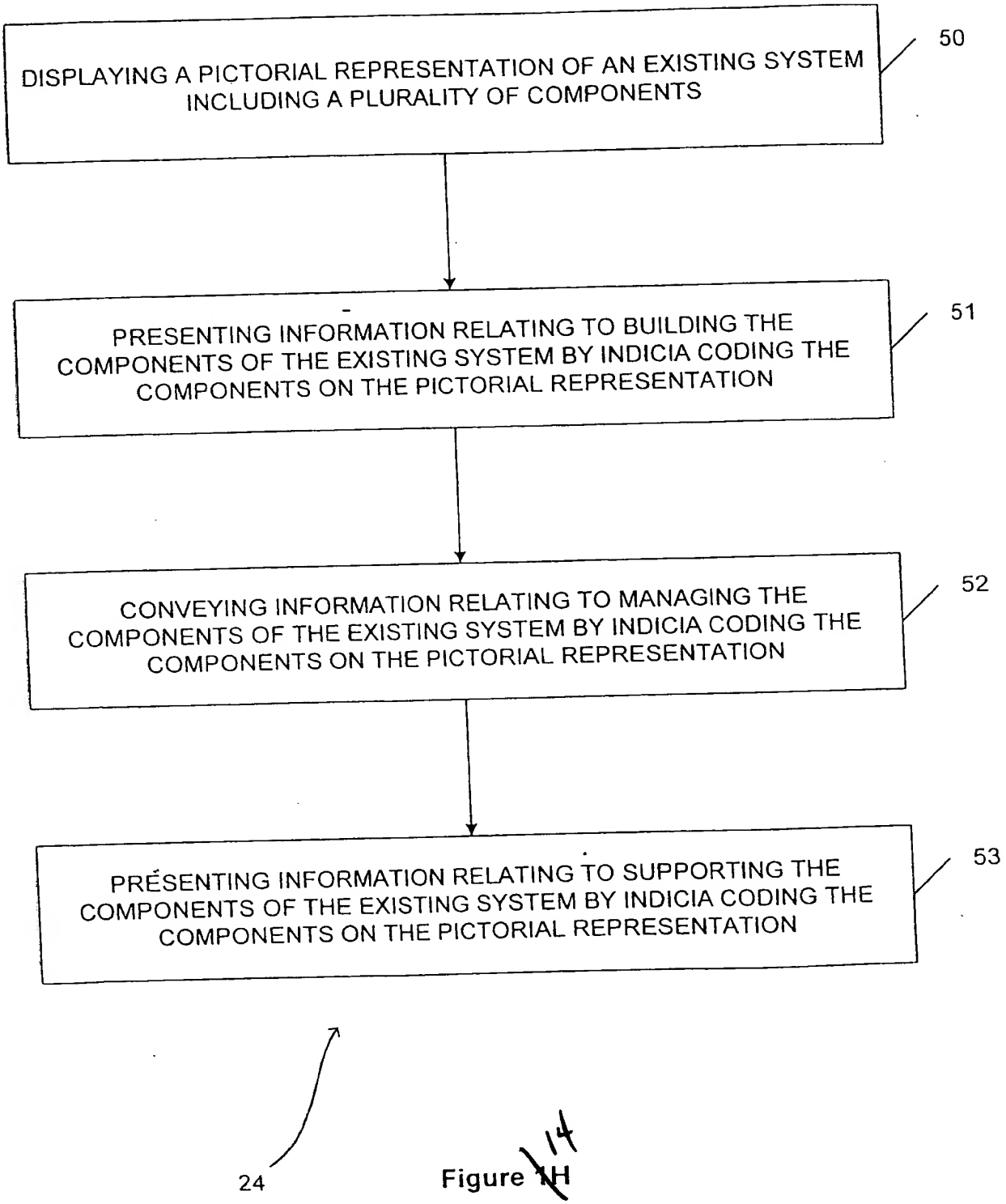

Figure 14

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

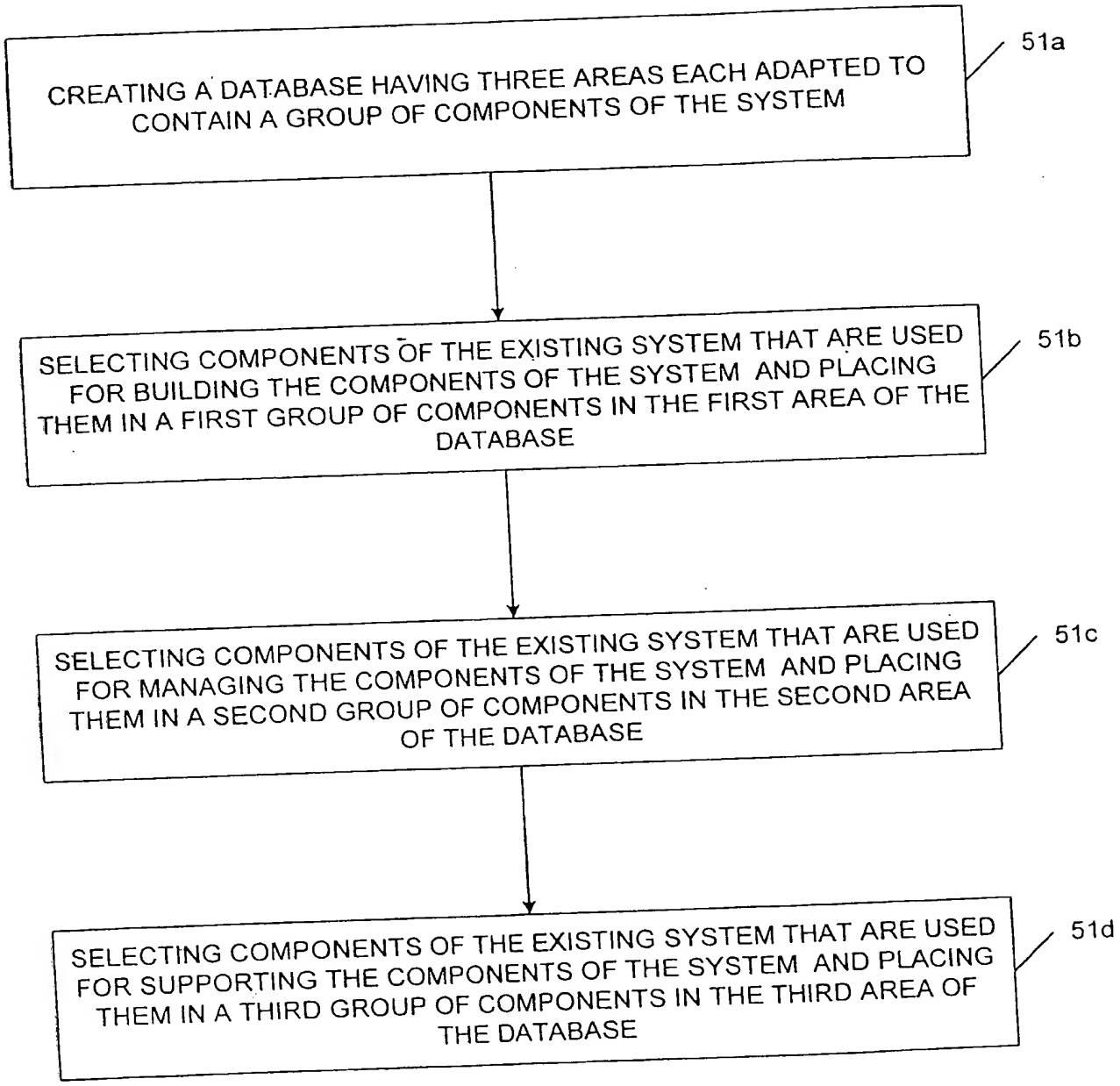

Figure 1H-1

OIPE JC15
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

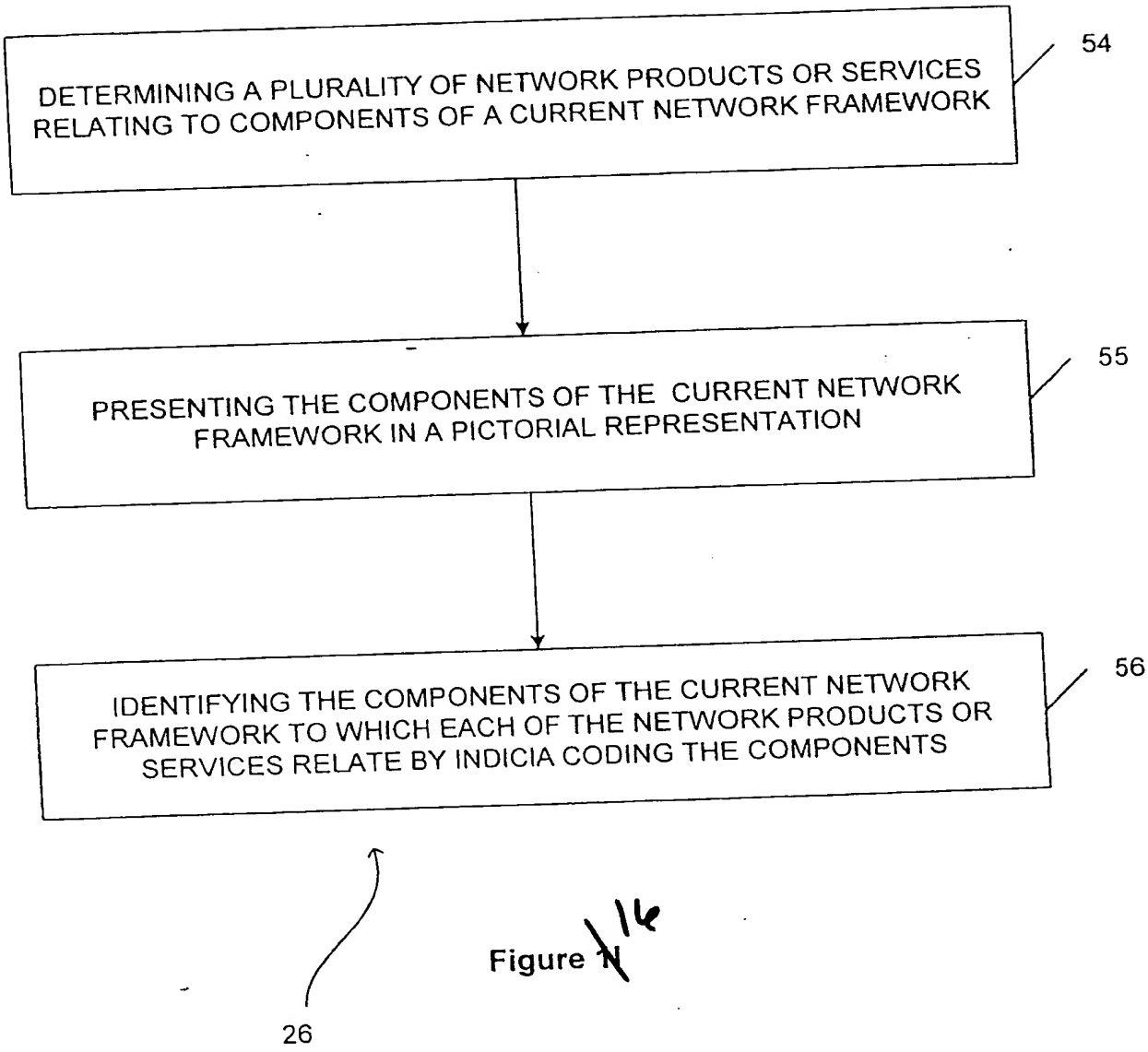

Figure 1/16

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

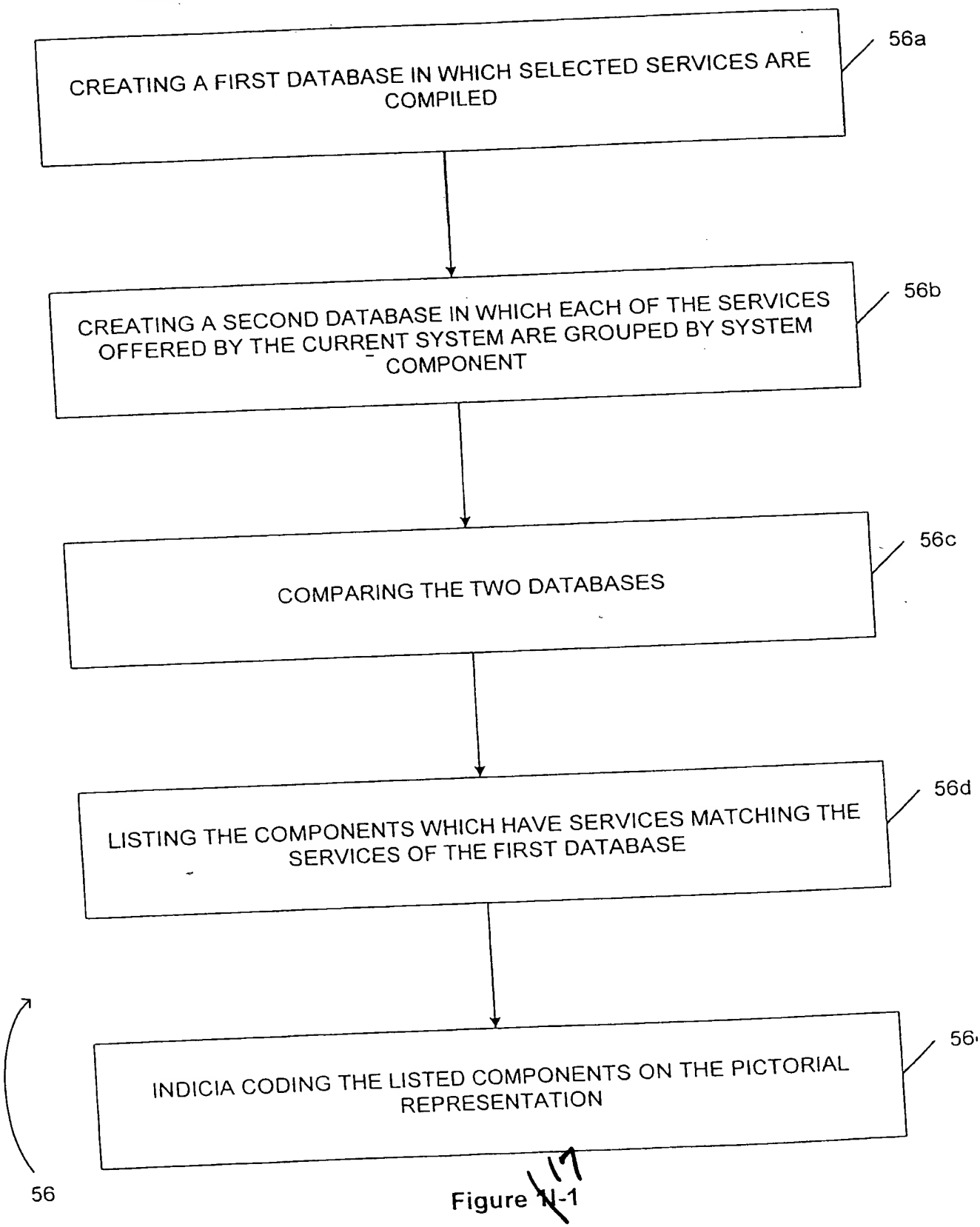

Figure 11-1

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
TC 2100

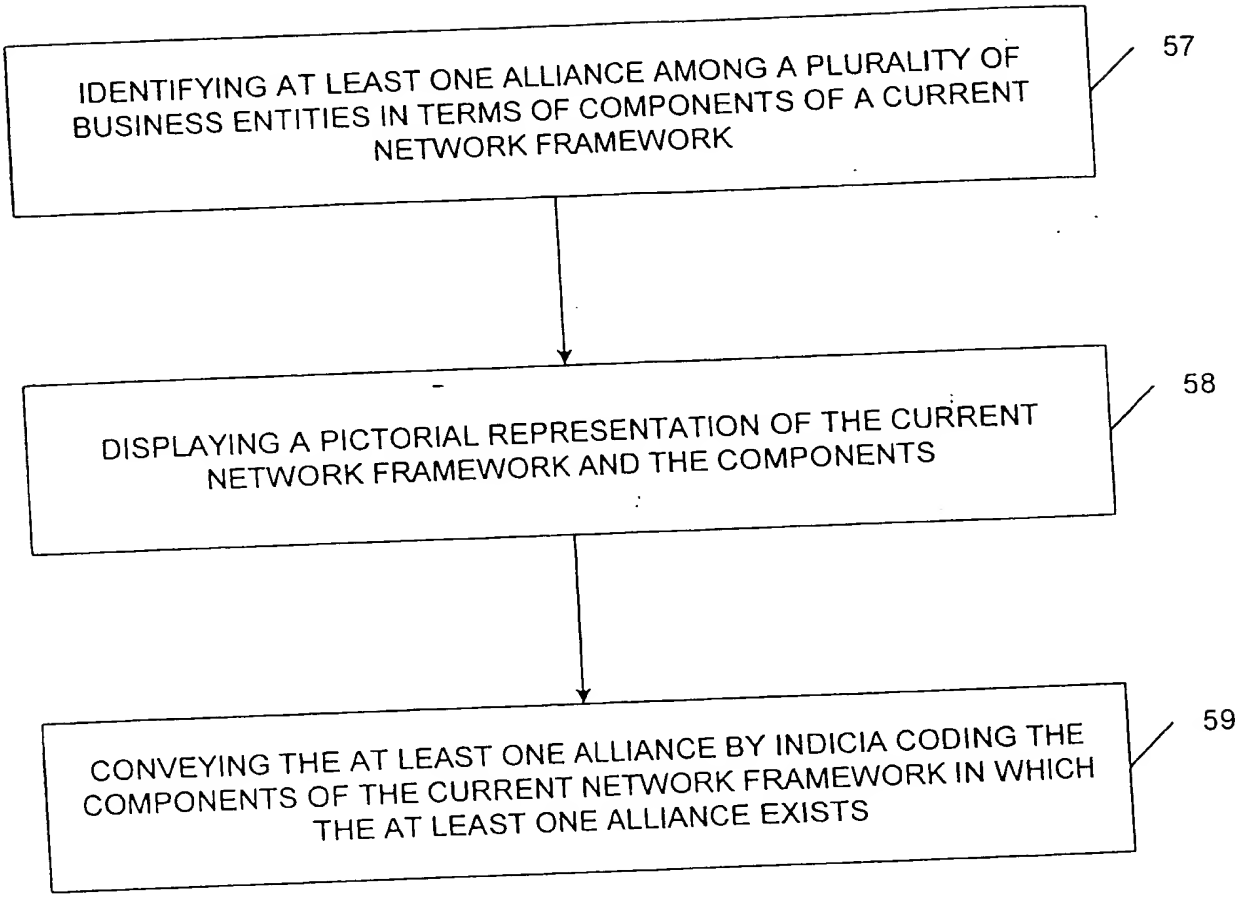

Figure 1/18

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

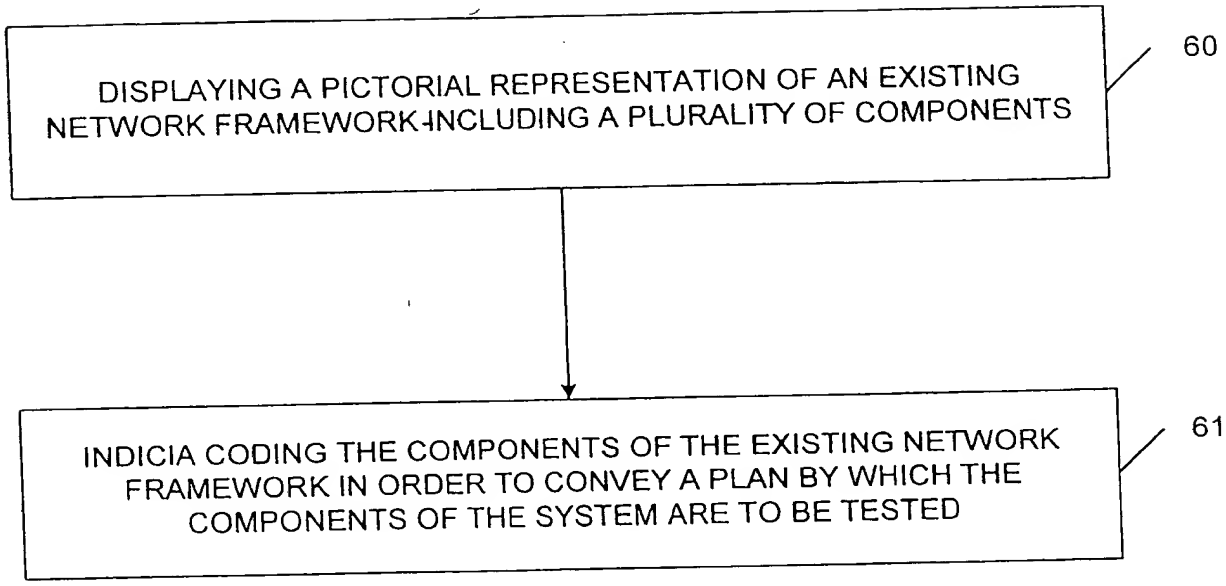

Figure 1K

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

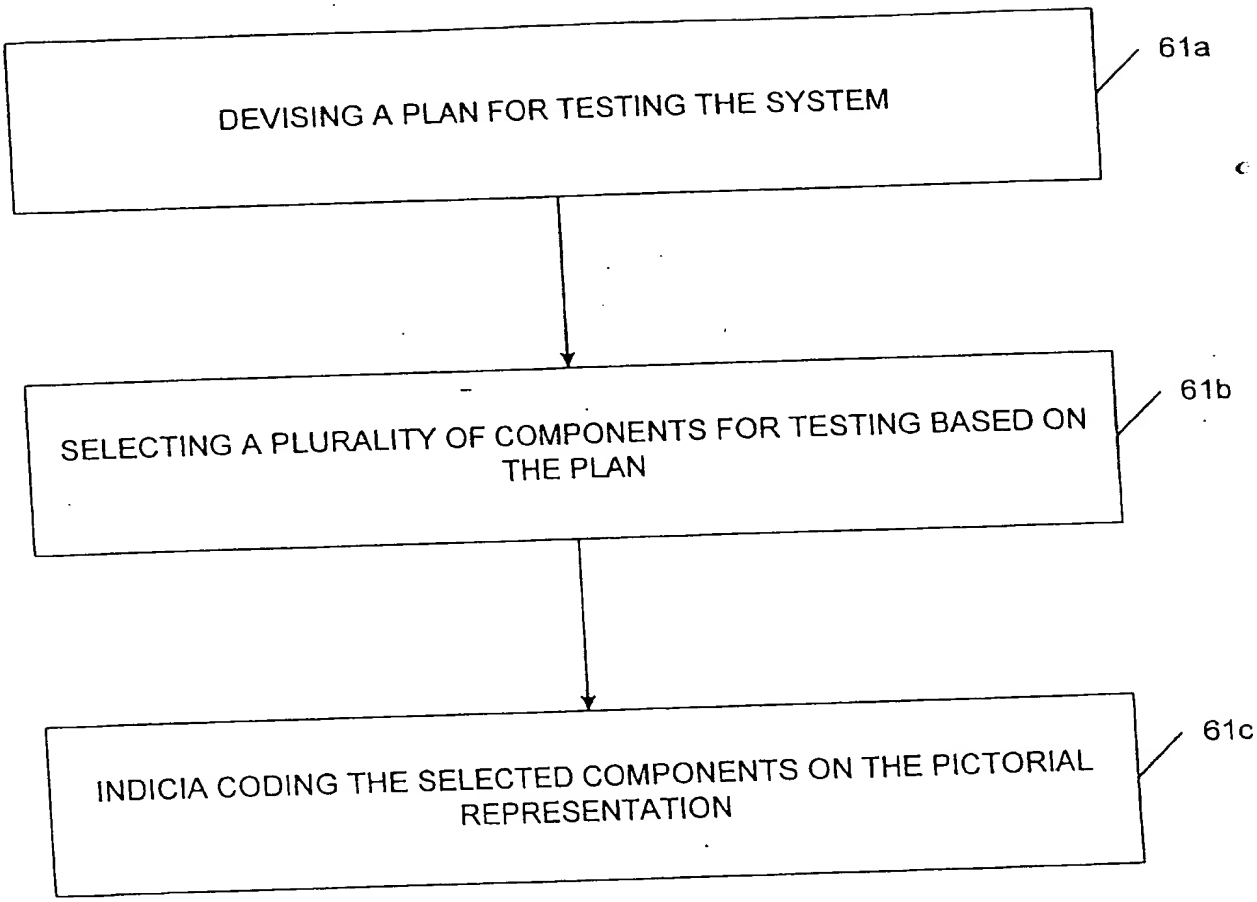

Figure 1A-1

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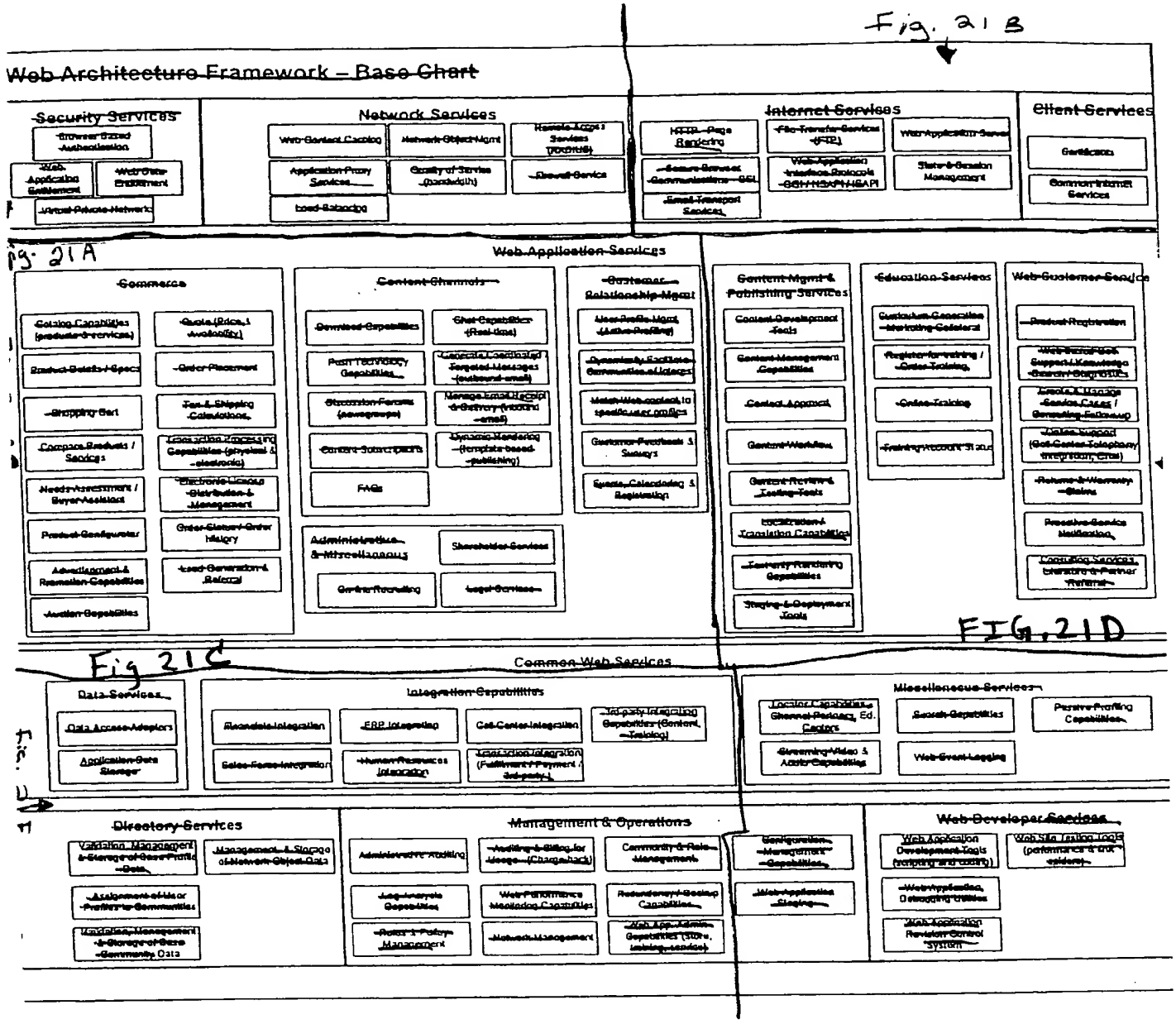

Figure 21

OIPE
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PATENT & TRADEMARK OFFICE
JC157

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

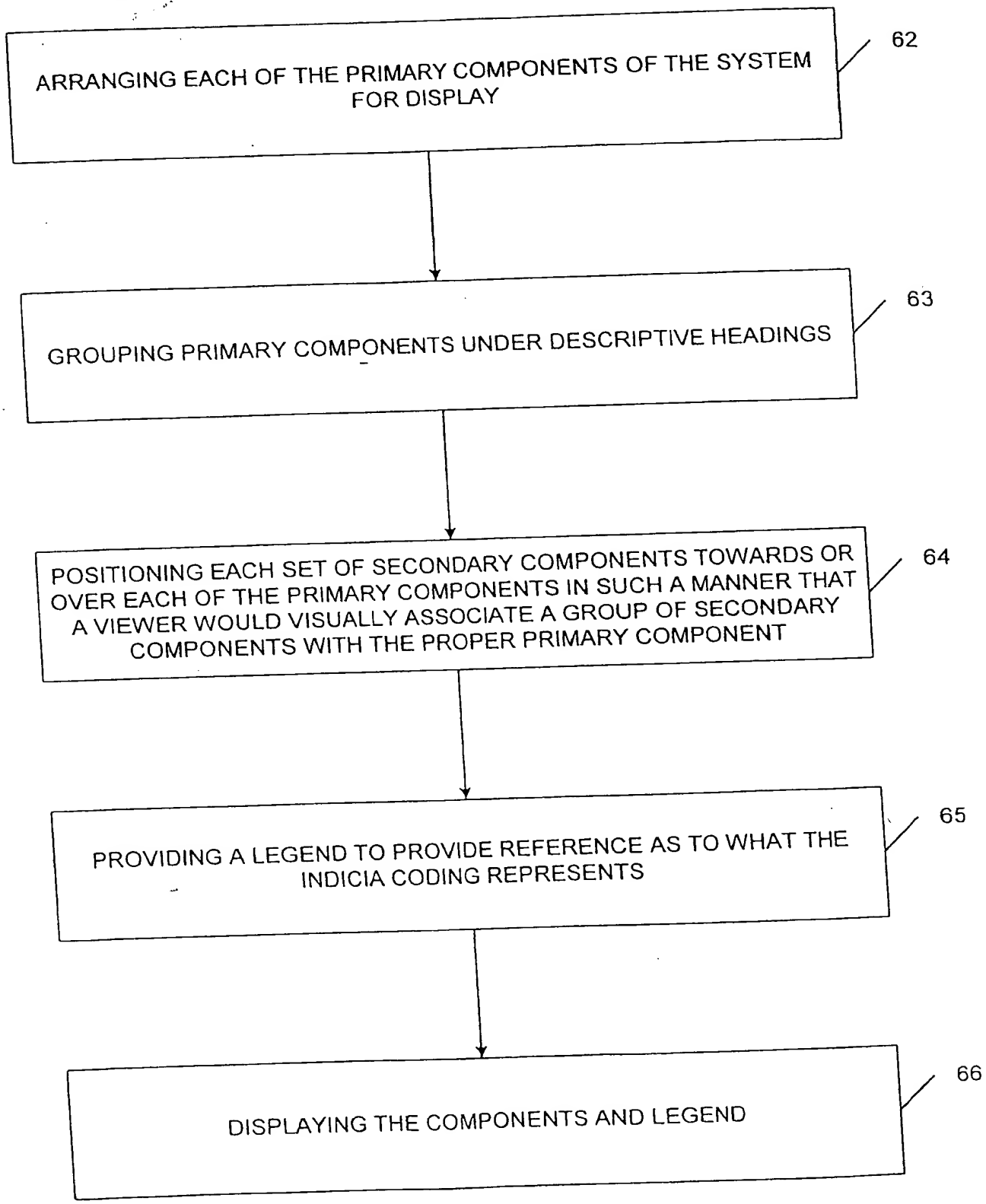

Figure 11-1

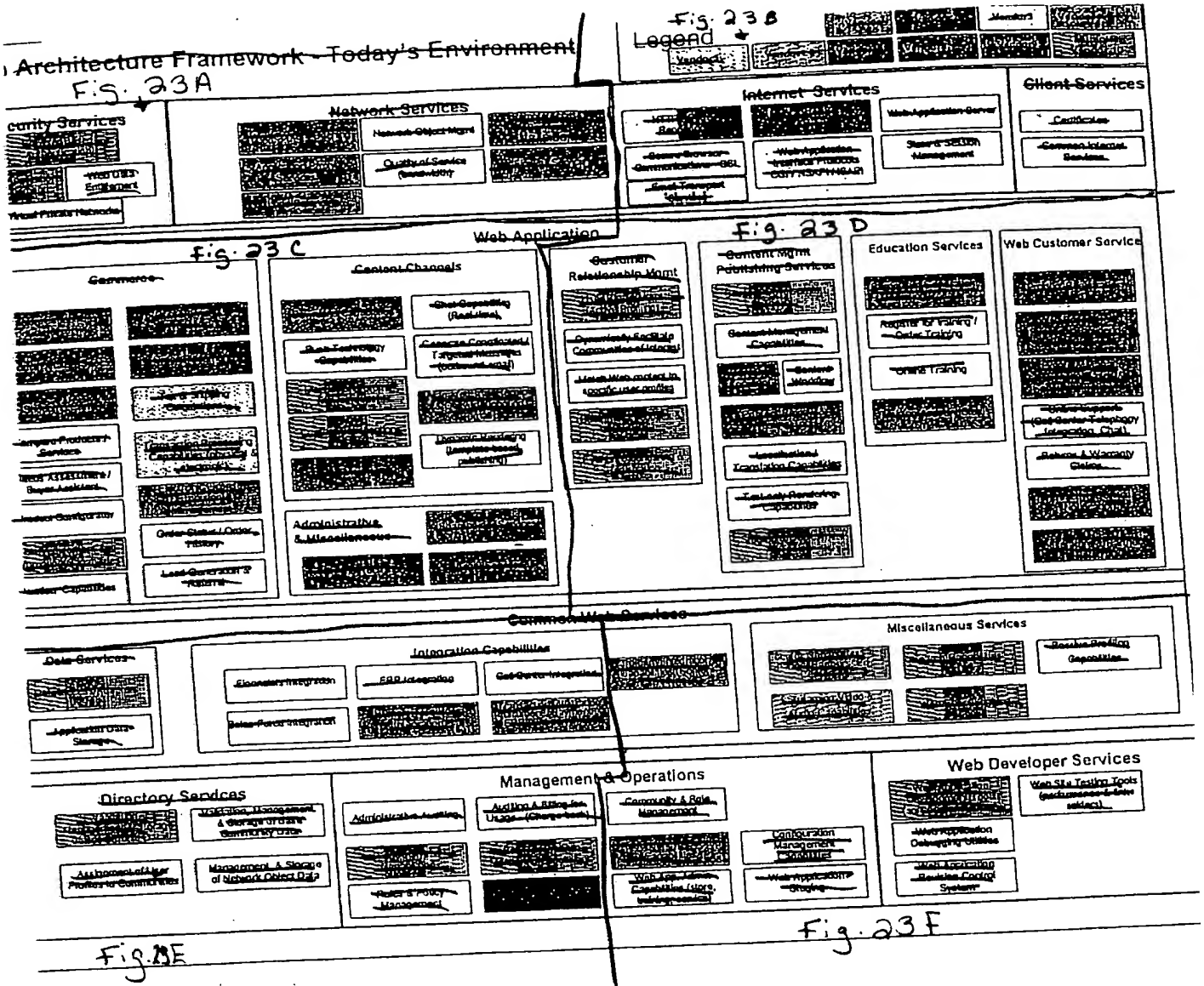

Figure 1M

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

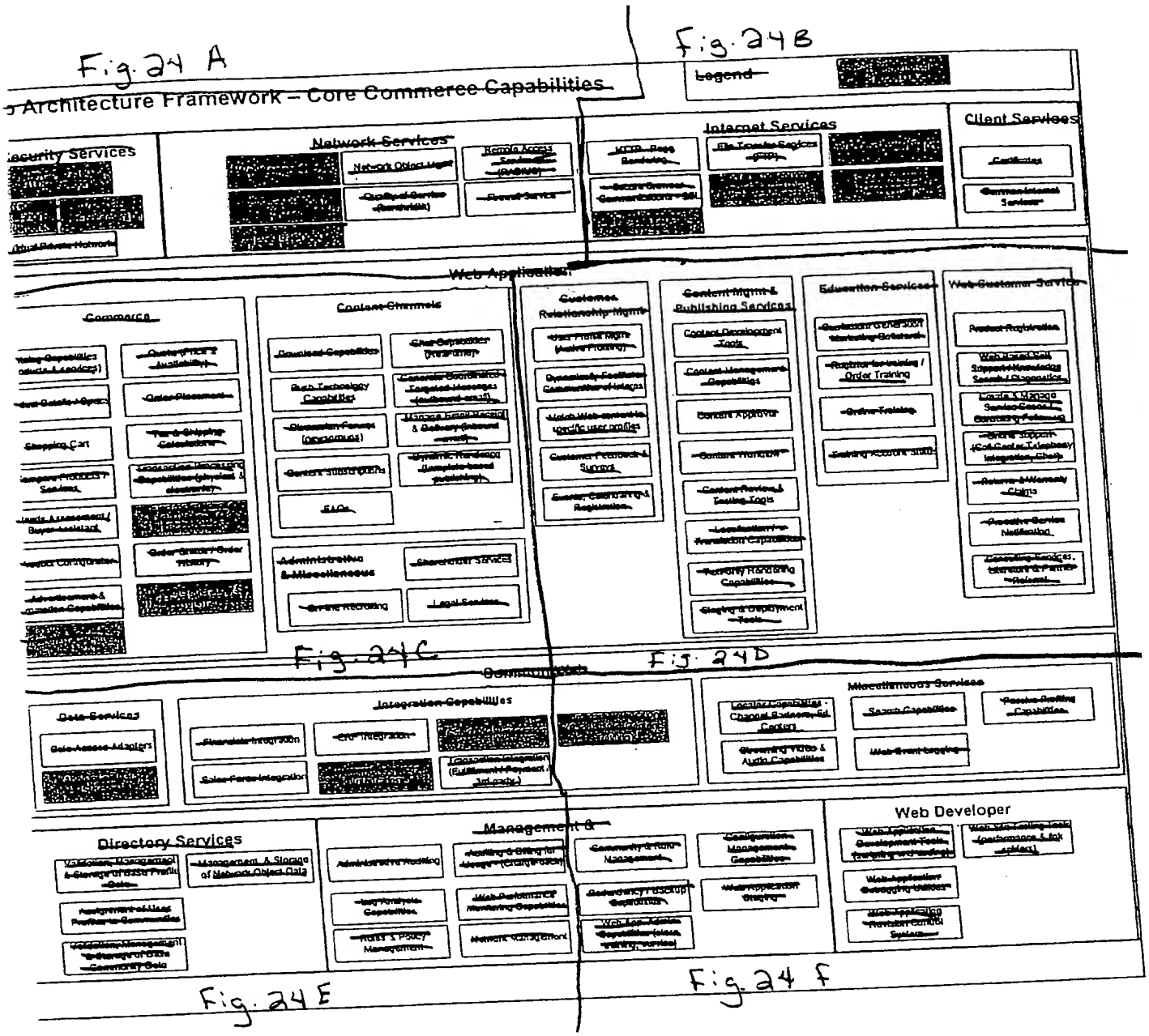

Figure 24

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

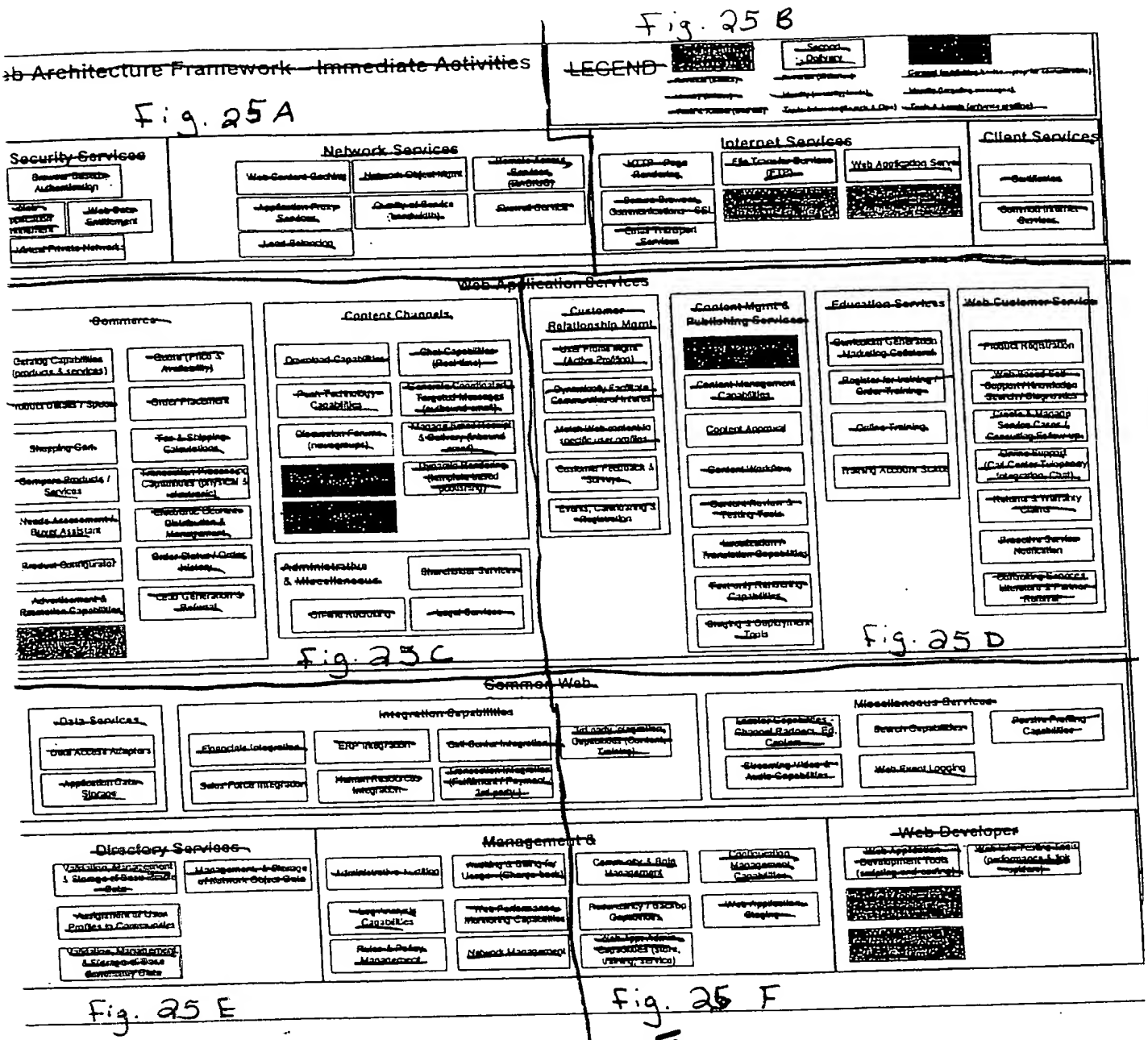

Figure 25

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

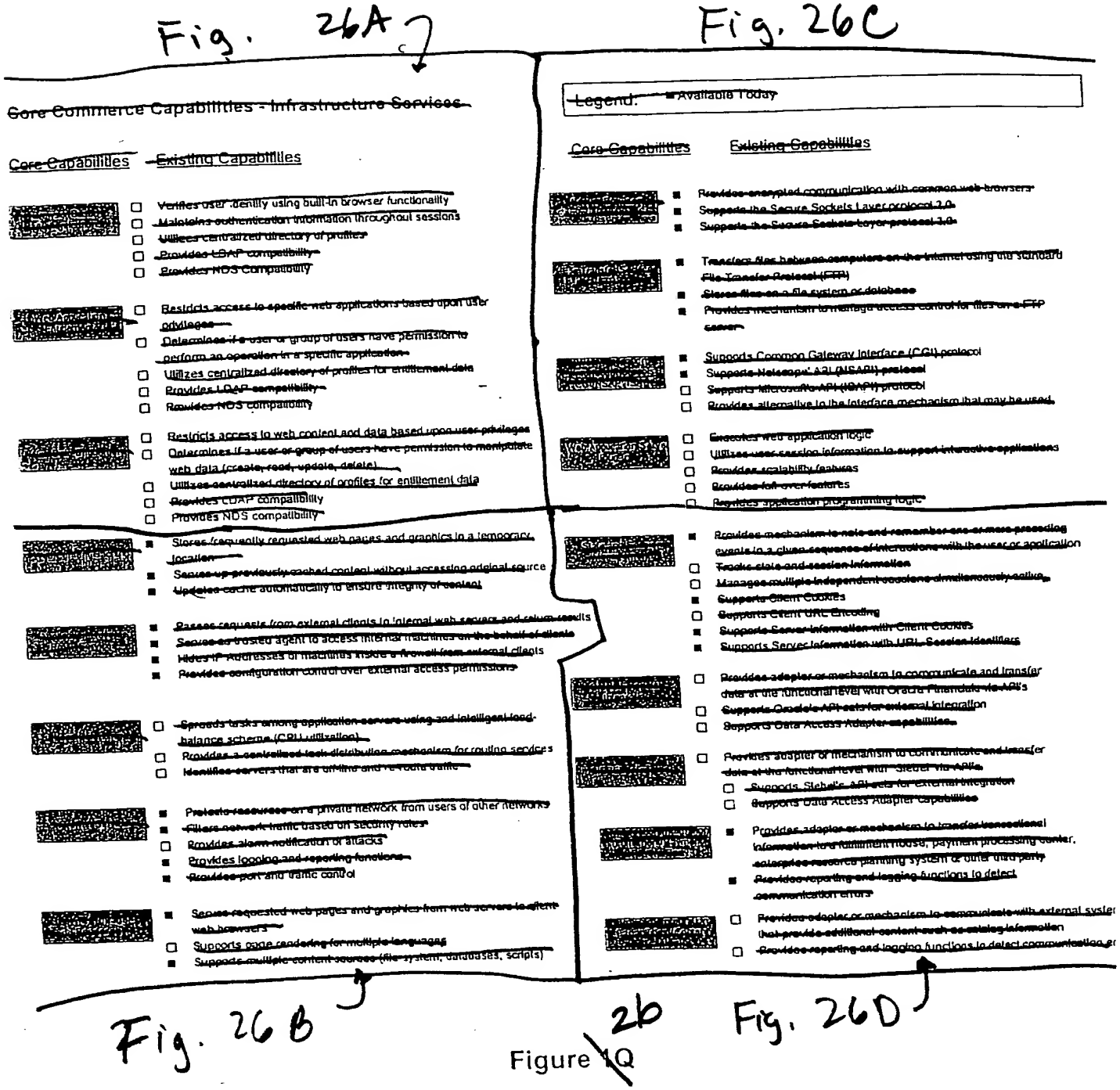

Figure 26

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
SC157

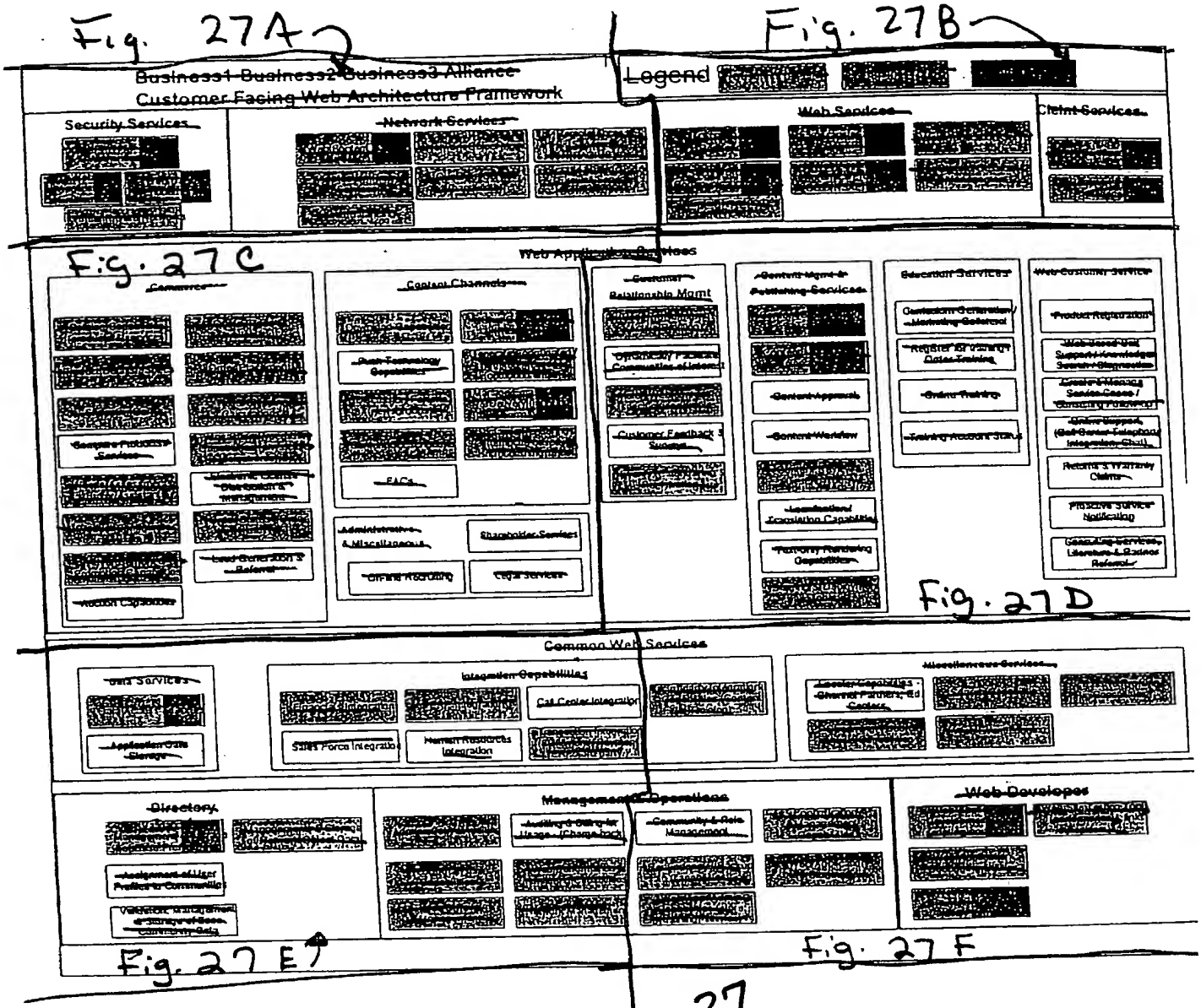

Figure 27R

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

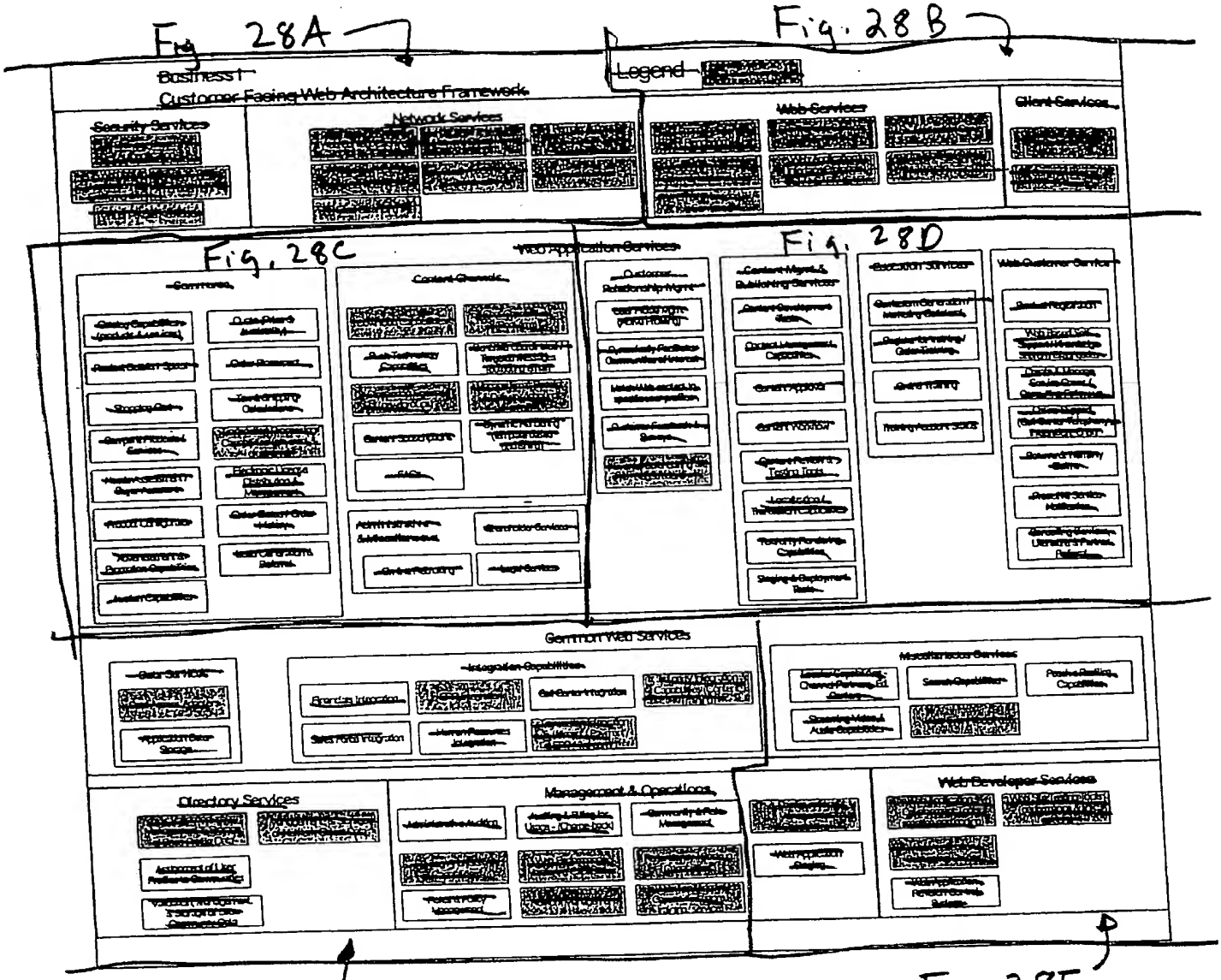

Figure 28

OIPE JC157 MAR 0 3 2003 PATENT & TRADEMARK OFFICE
OIPE JC157 MAR 0 3 2003 PATENT & TRADEMARK OFFICE

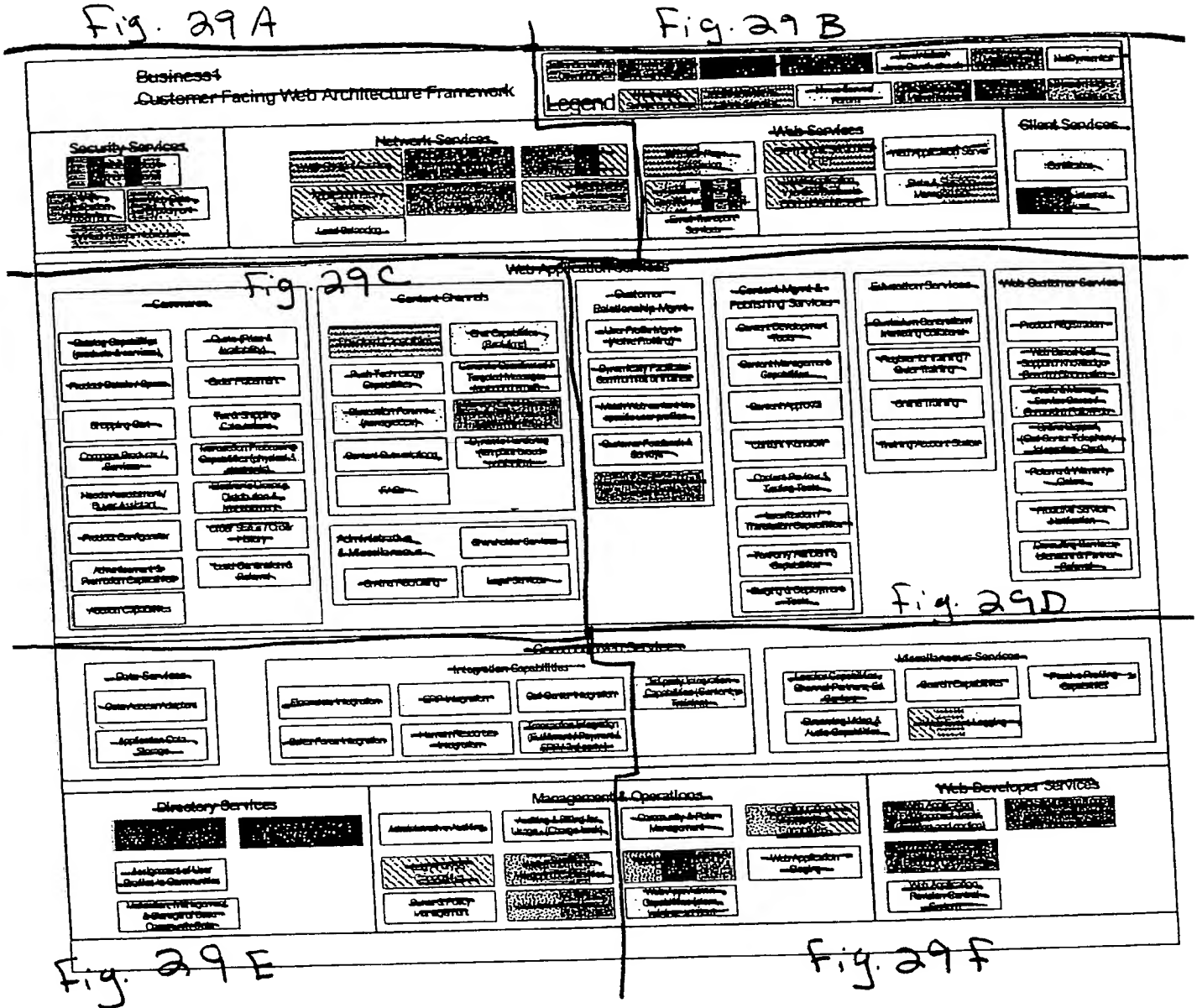

Figure 29

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

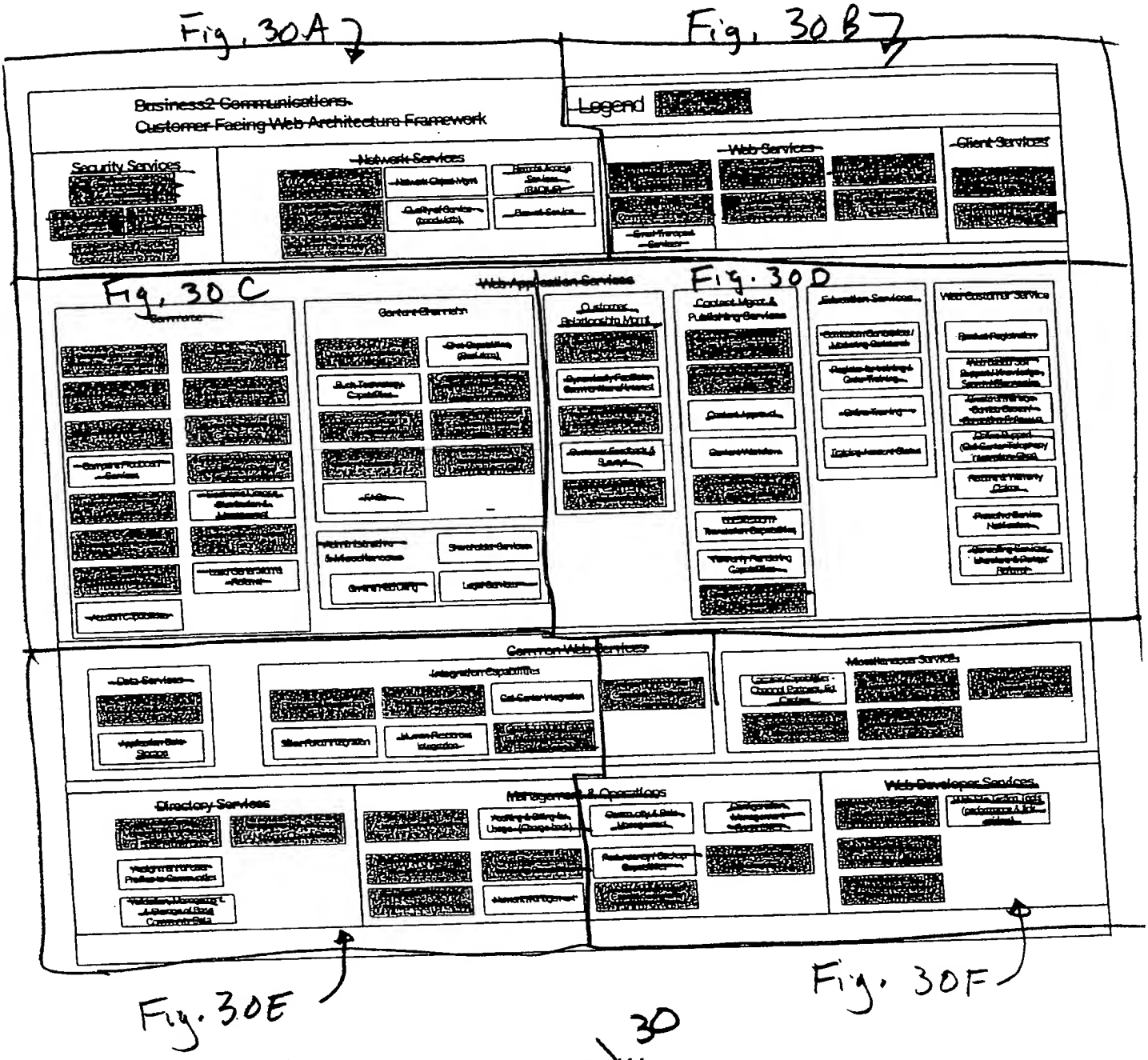

Figure 30

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC67

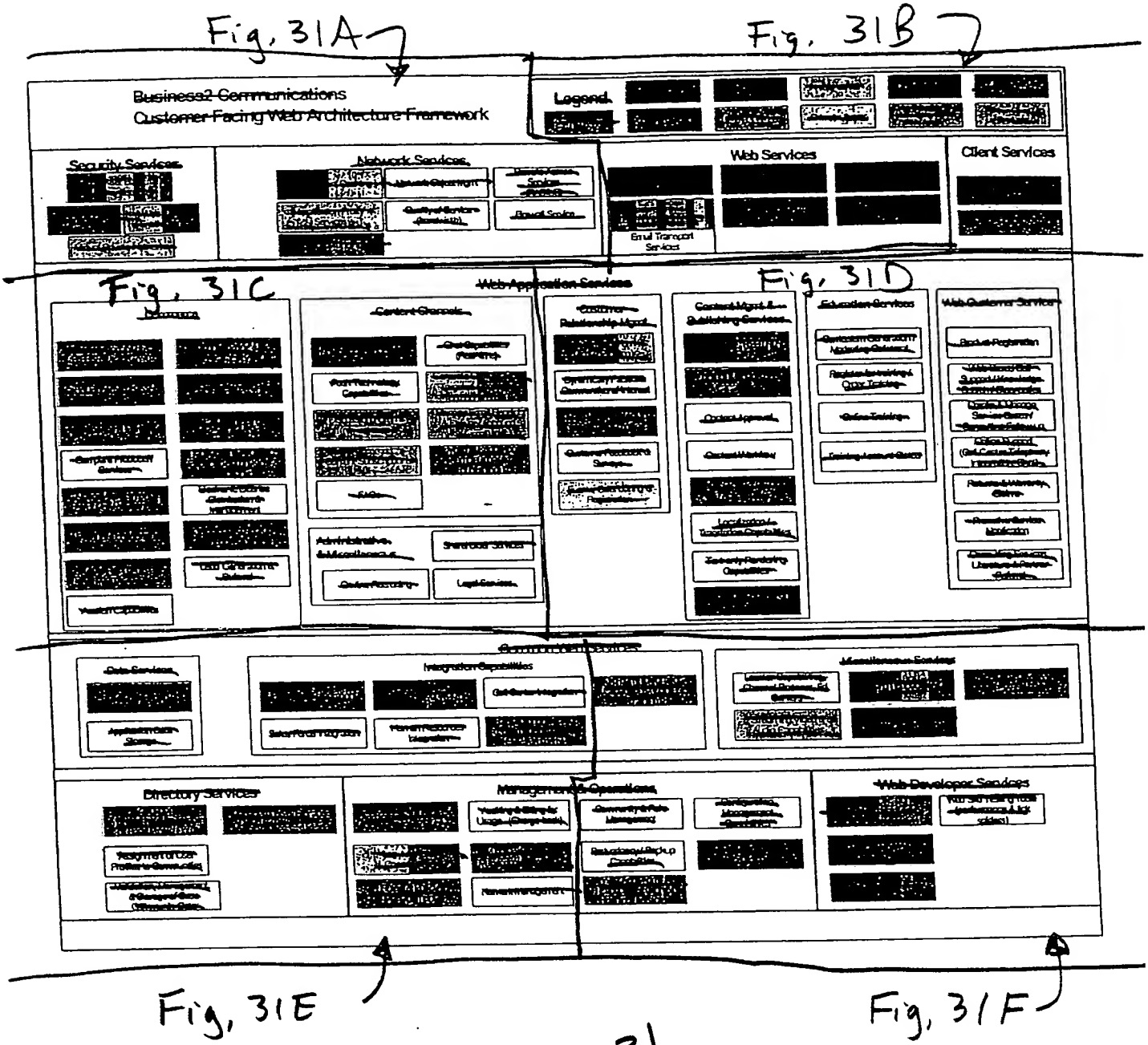

Figure 31

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
SC157

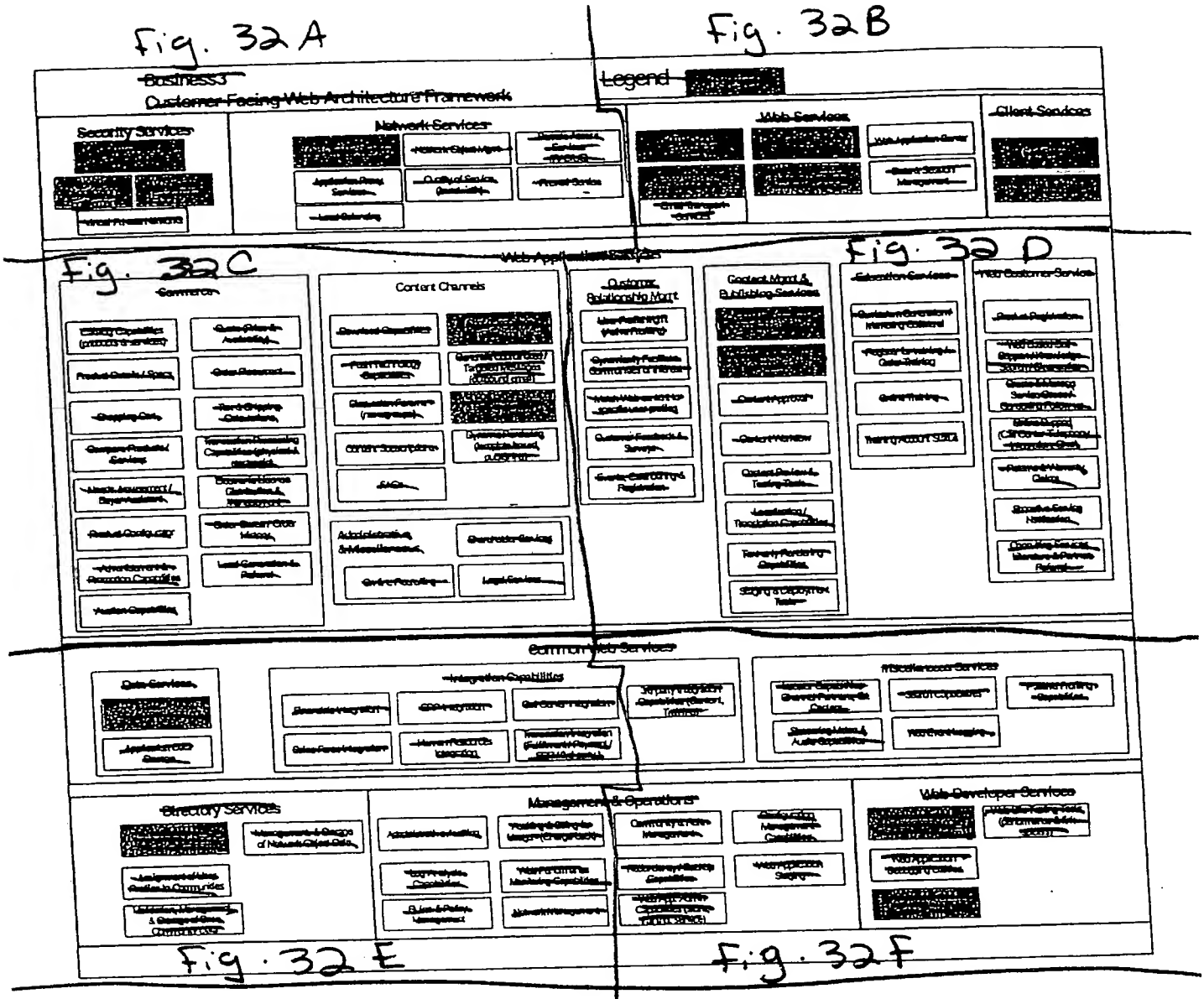

Figure 32

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

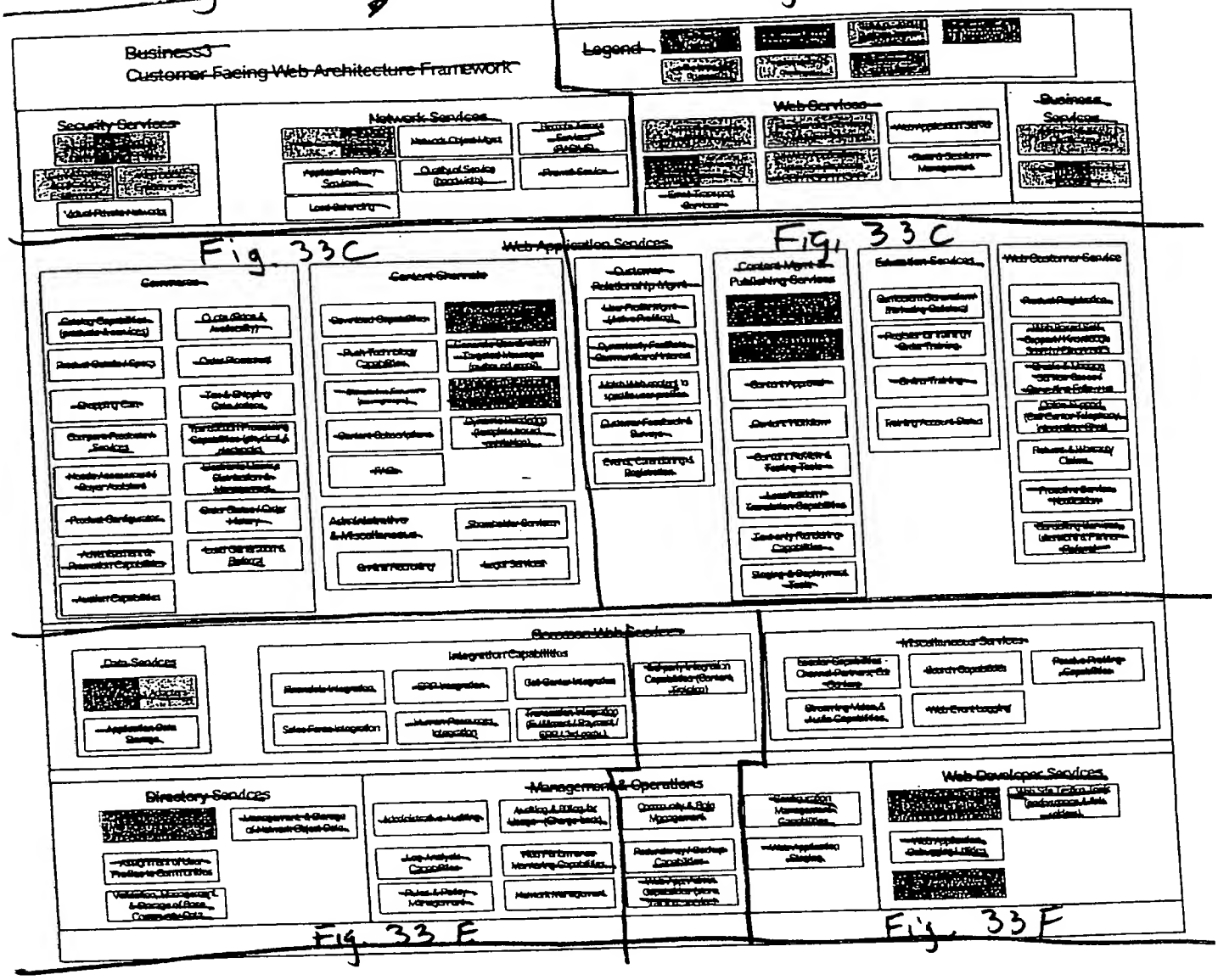

Figure 33

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Fig. 34 A

Fig. 34 B

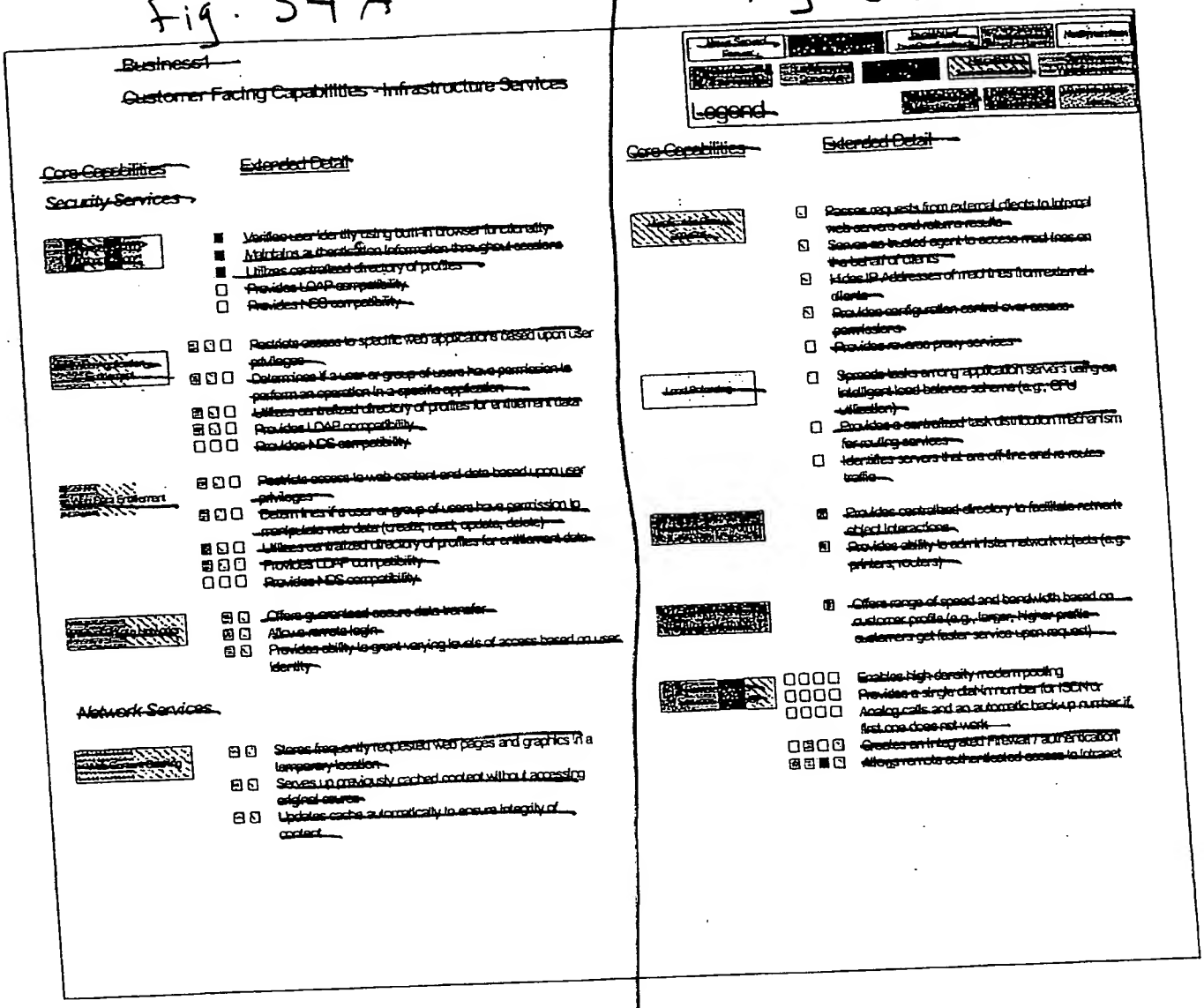

Figure 34

OIPE JC15
MAR 0 3 2003
PATENT & TRADEMARK

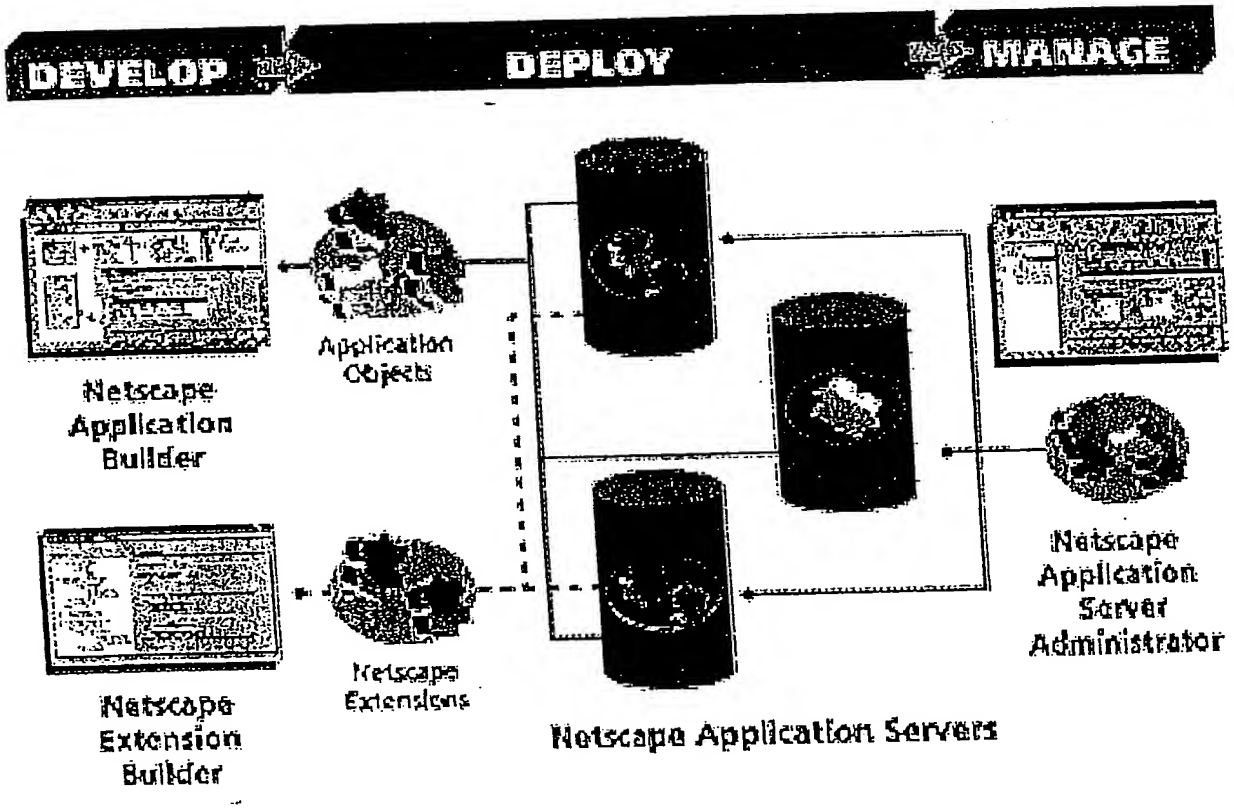

Figure 35

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

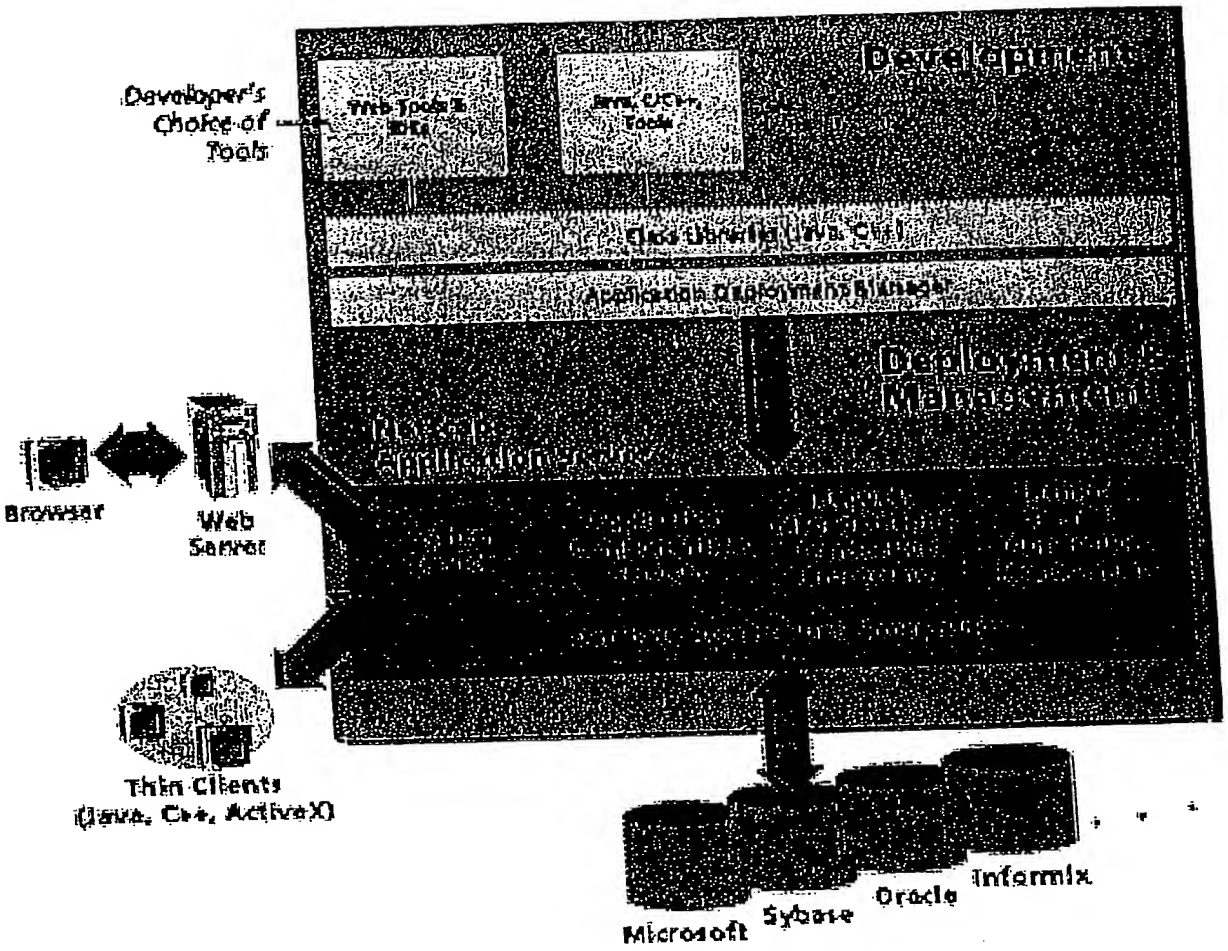

Figure ~~1~~ 36A

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client2 ECXpert

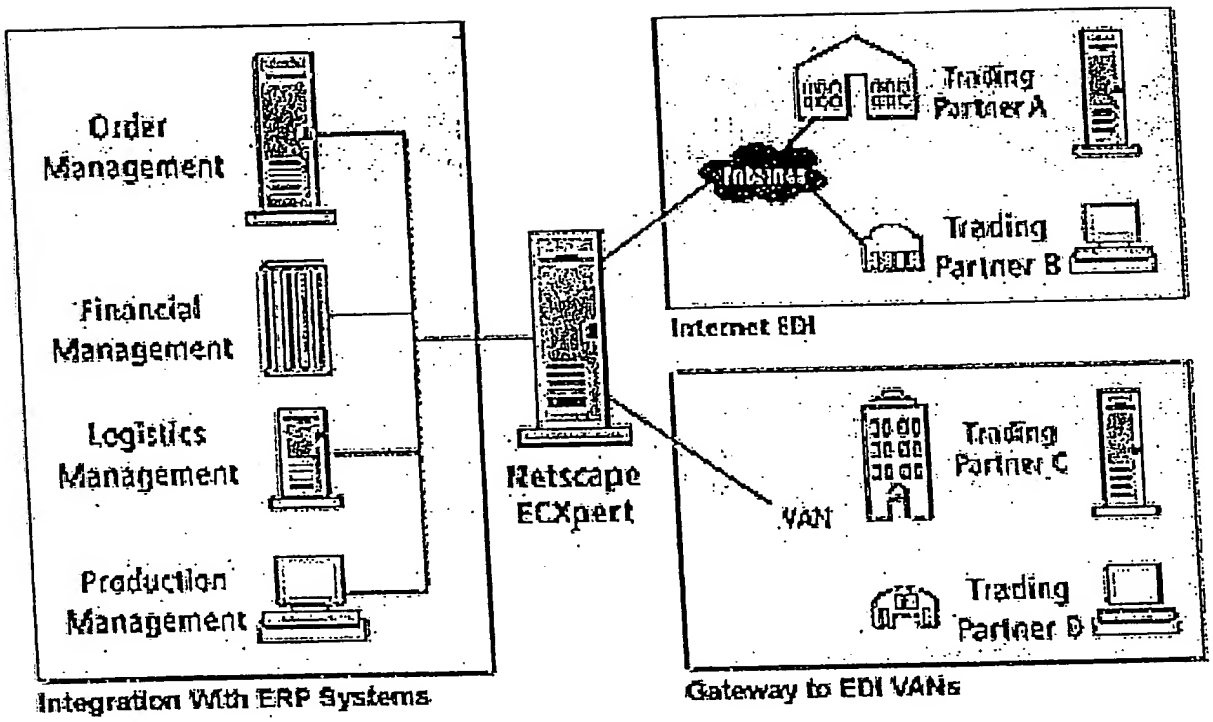

Figure 37AB

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client2 ECXpert

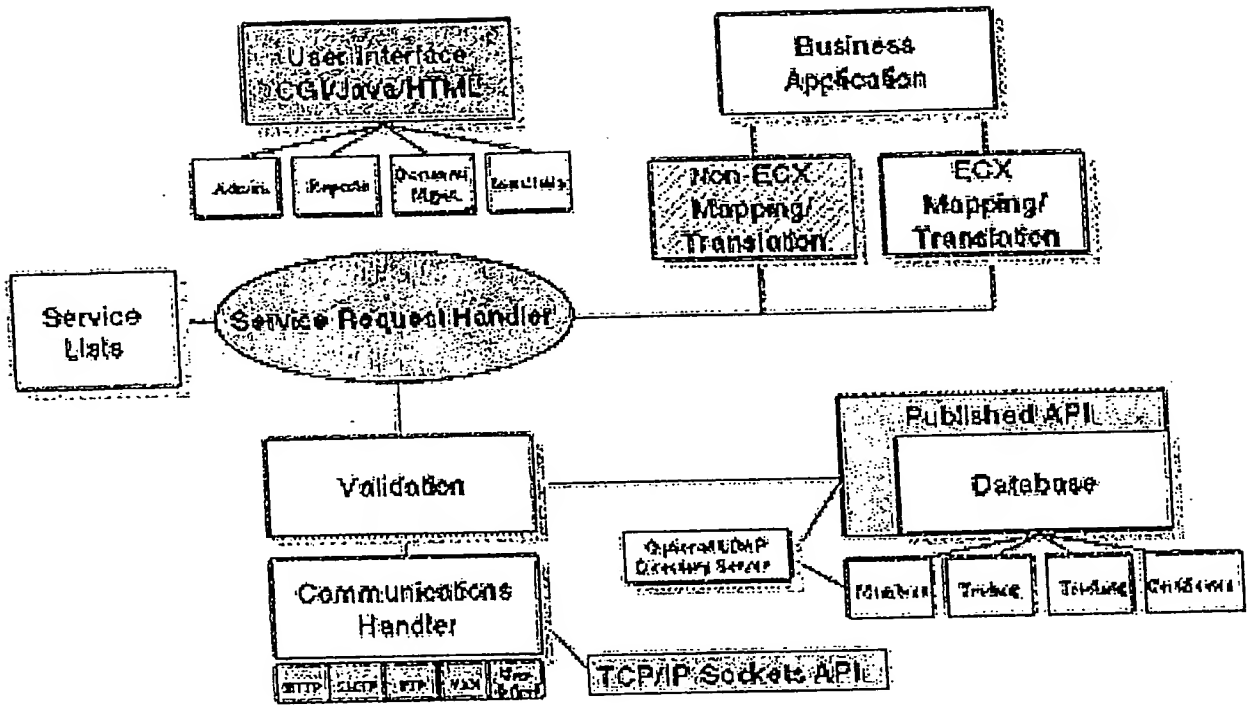

Figure 1C

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client2 SellerXpert

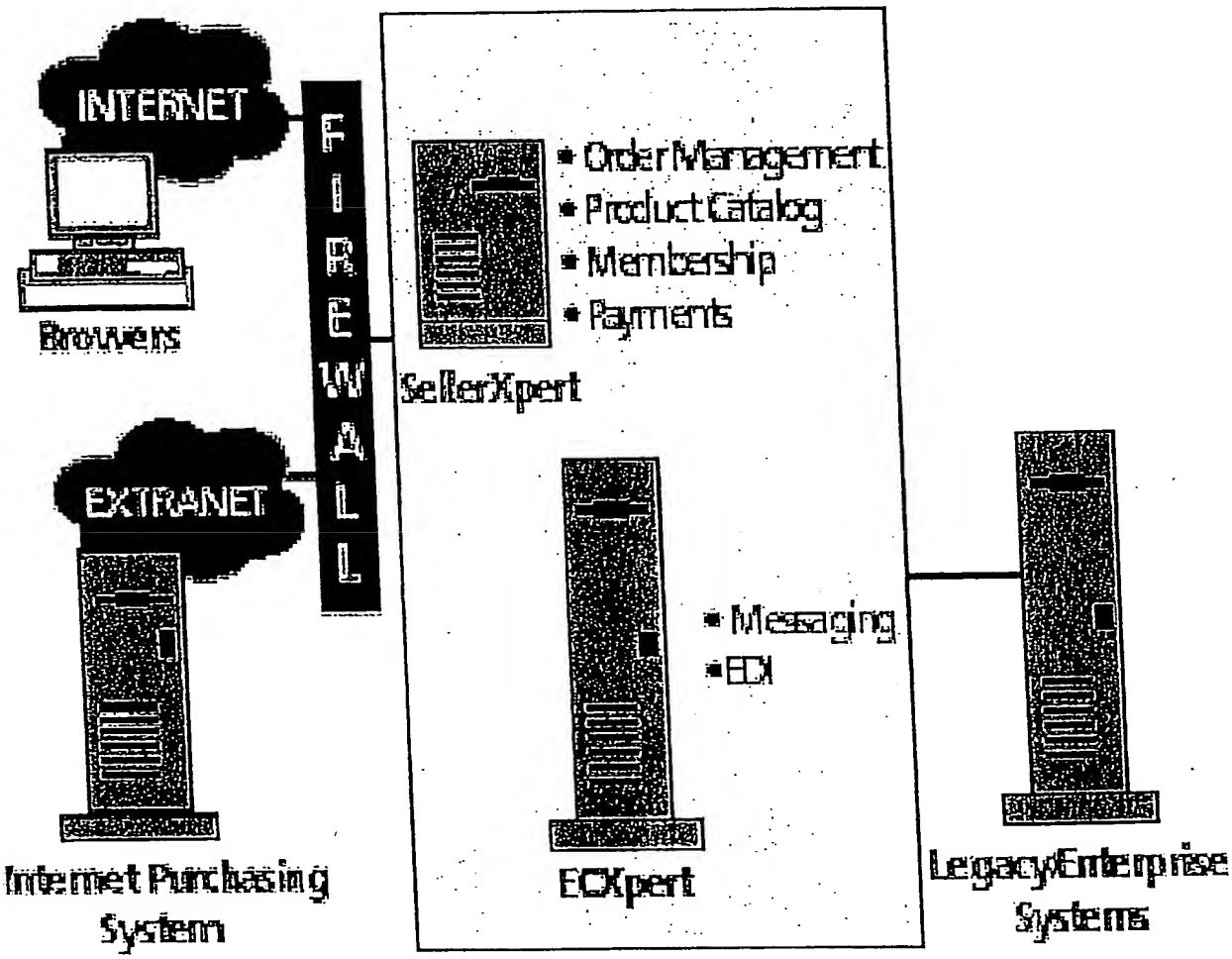

Figure 1AD

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client2 PublishingXpert

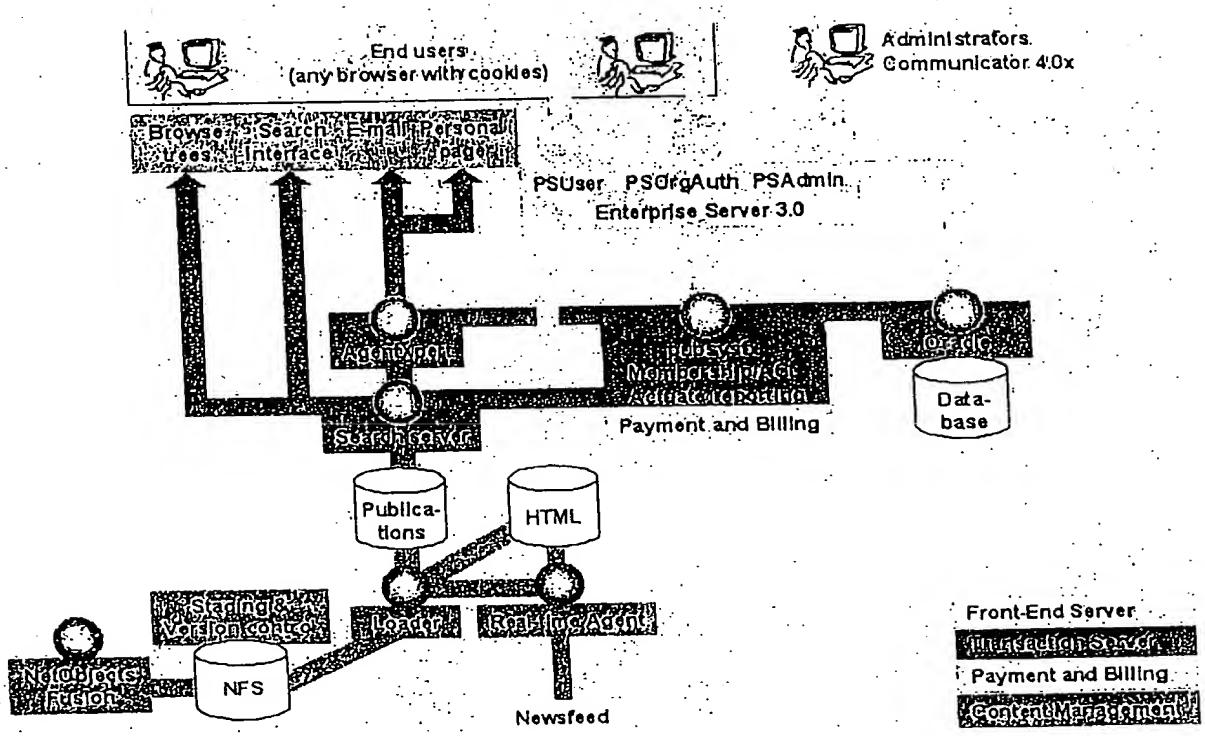

Figure 1AE

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OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client1 NetDynamics

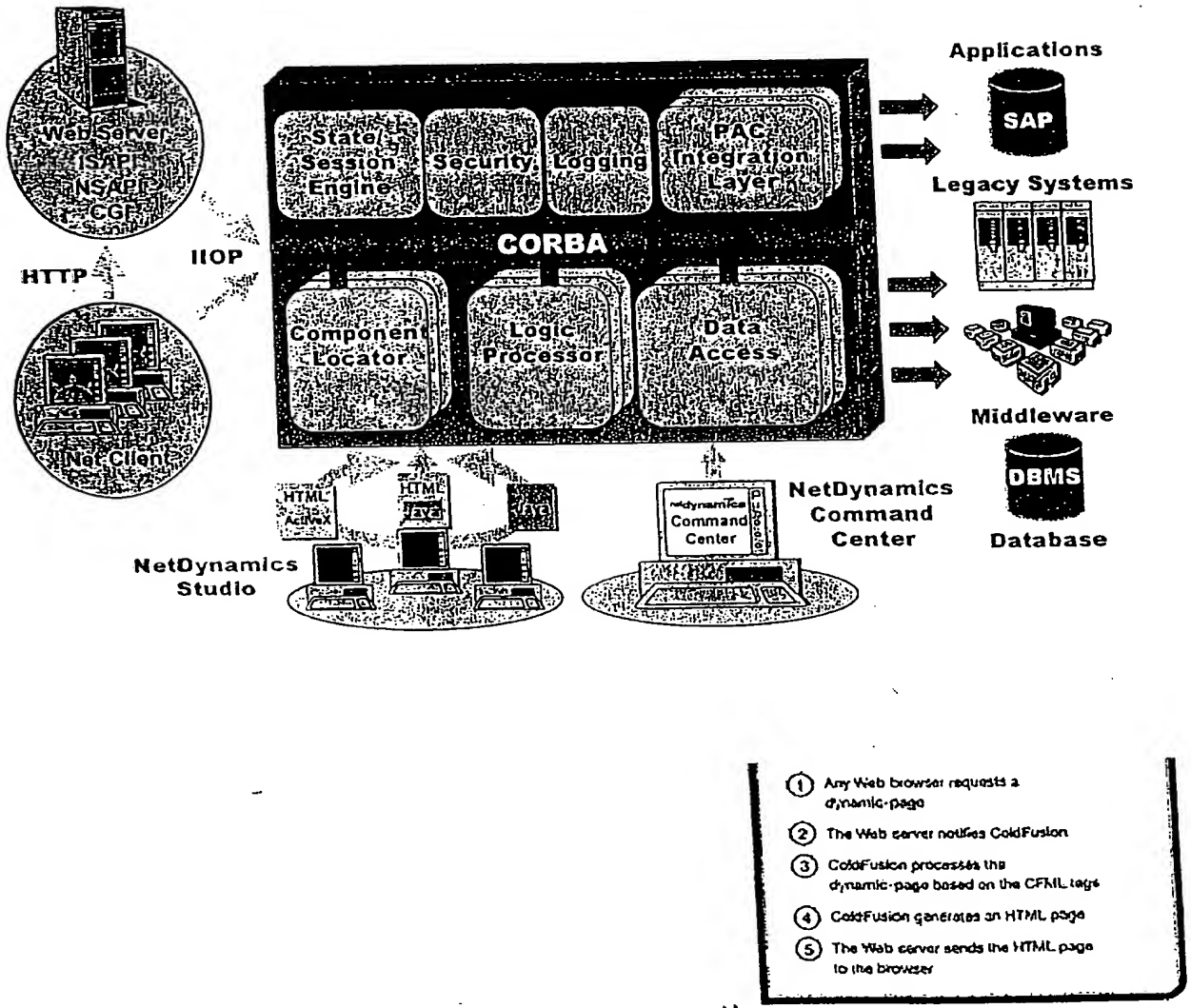

Figure 1AF

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

Client1 Internet Mail Server

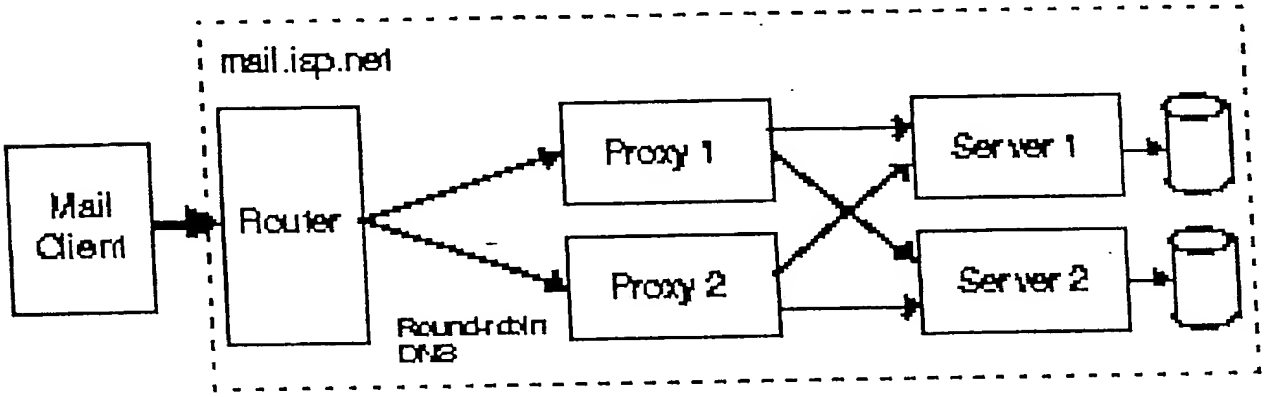

Figure 1AG

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OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

Client1 Internet News Server

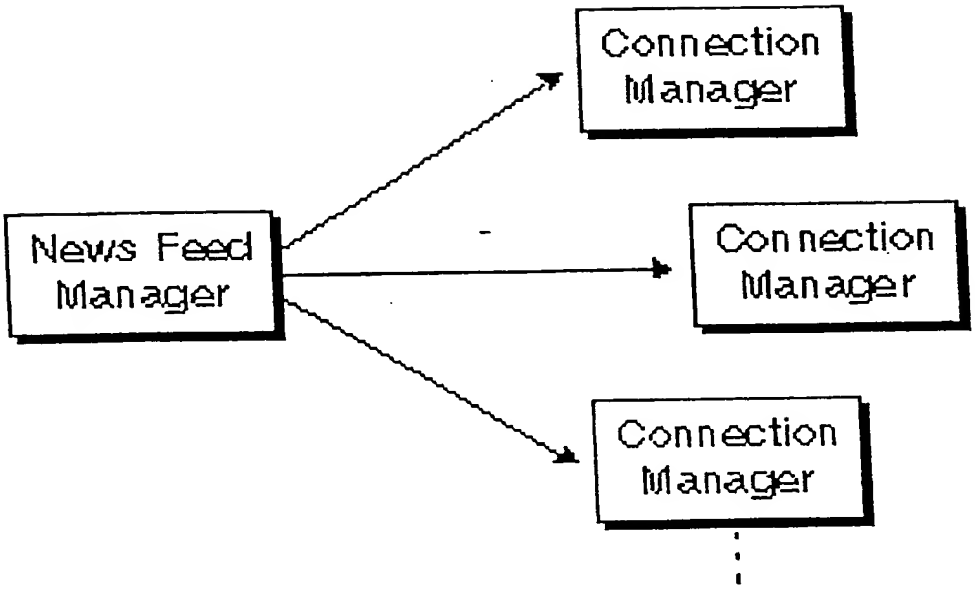

Figure 1AH

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OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client1 Personal WebAccess Browser

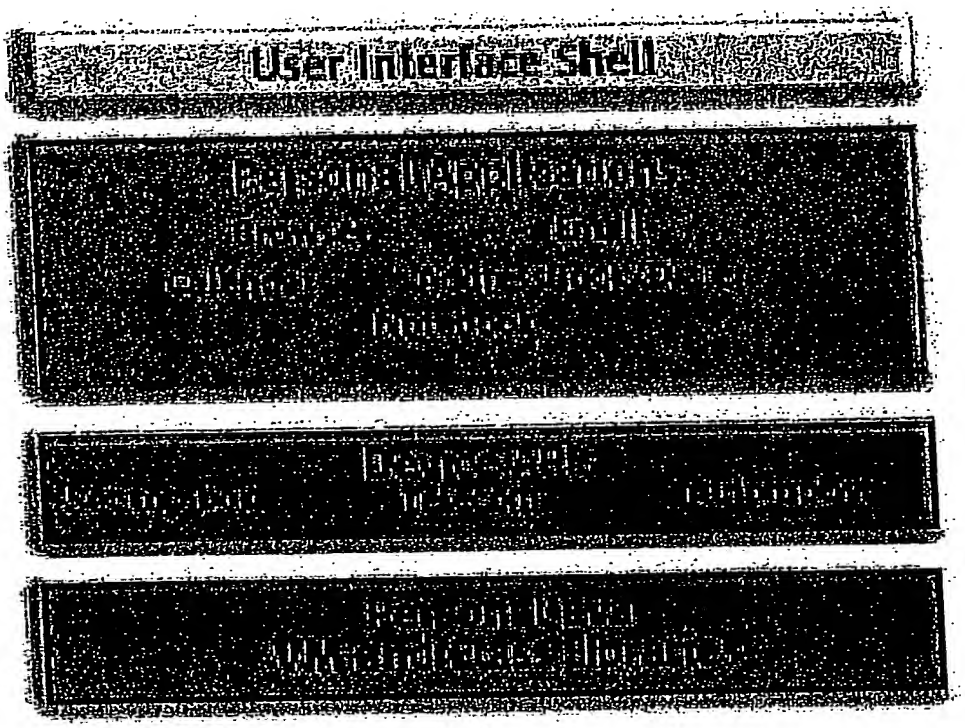

Figure ~~1A~~

OIPE JC197
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client1 Directory Services

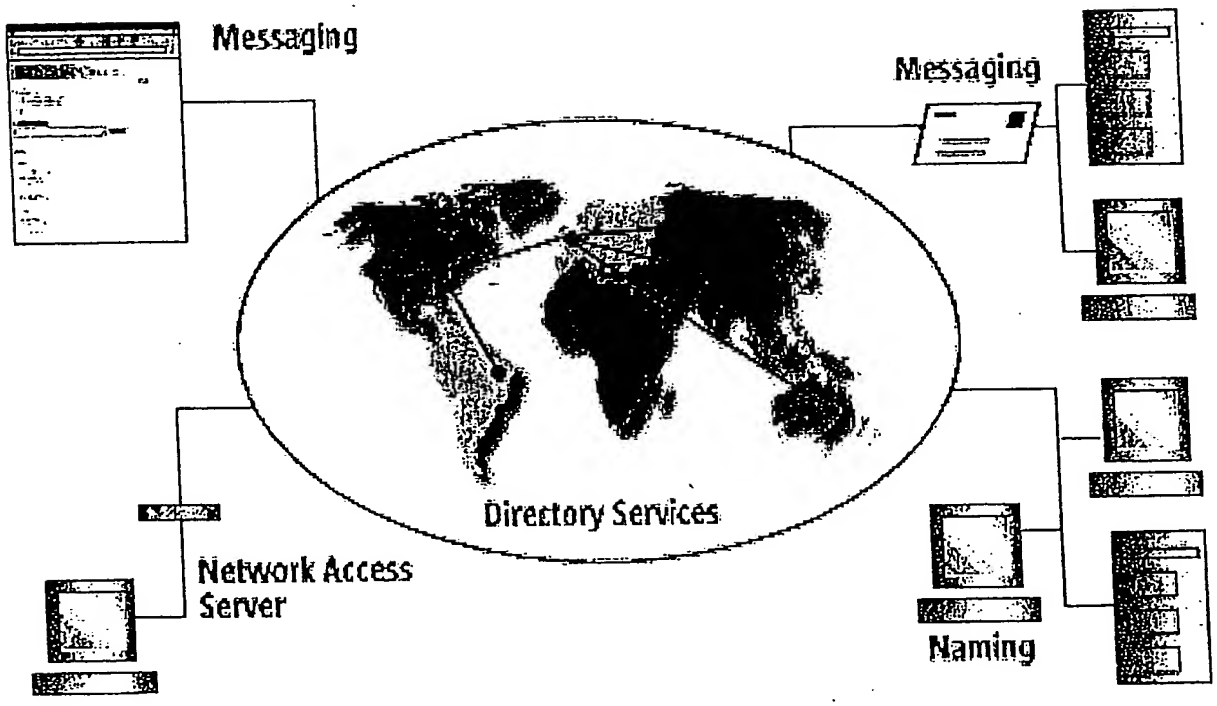

Figure 1AJ

45

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

Client1 JavaWallet

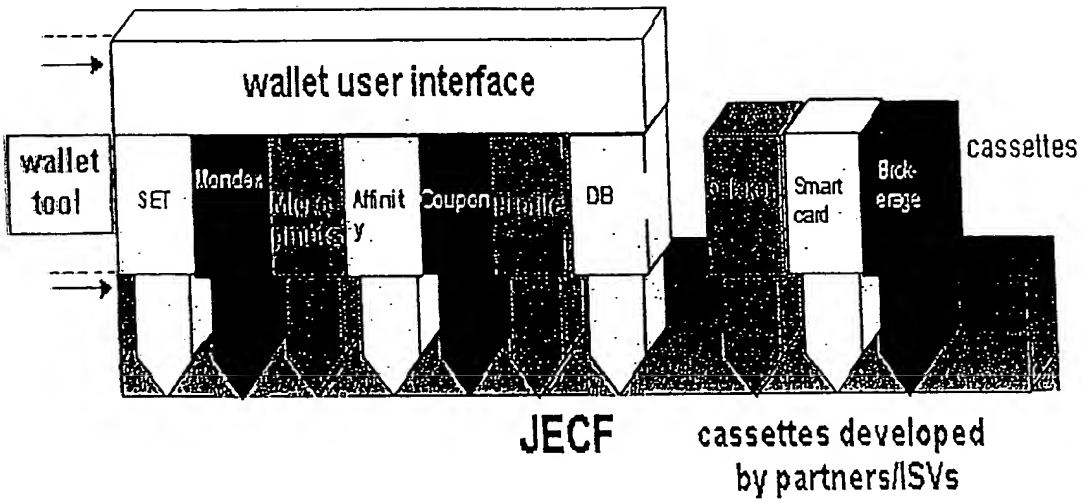

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Figure 1AK

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

Client1Screen Product Suite

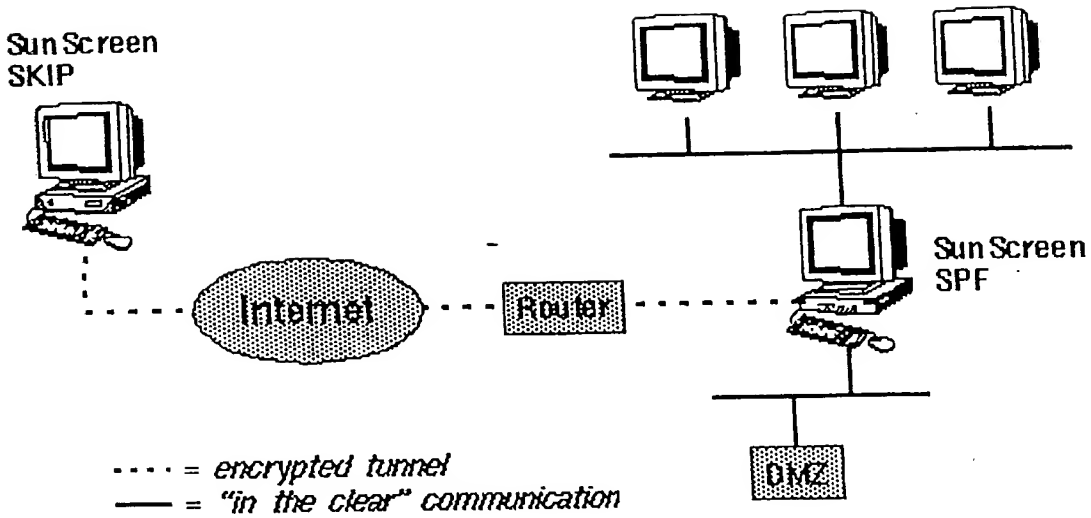

Figure 1A 47

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

Netra Internet Server Bundle

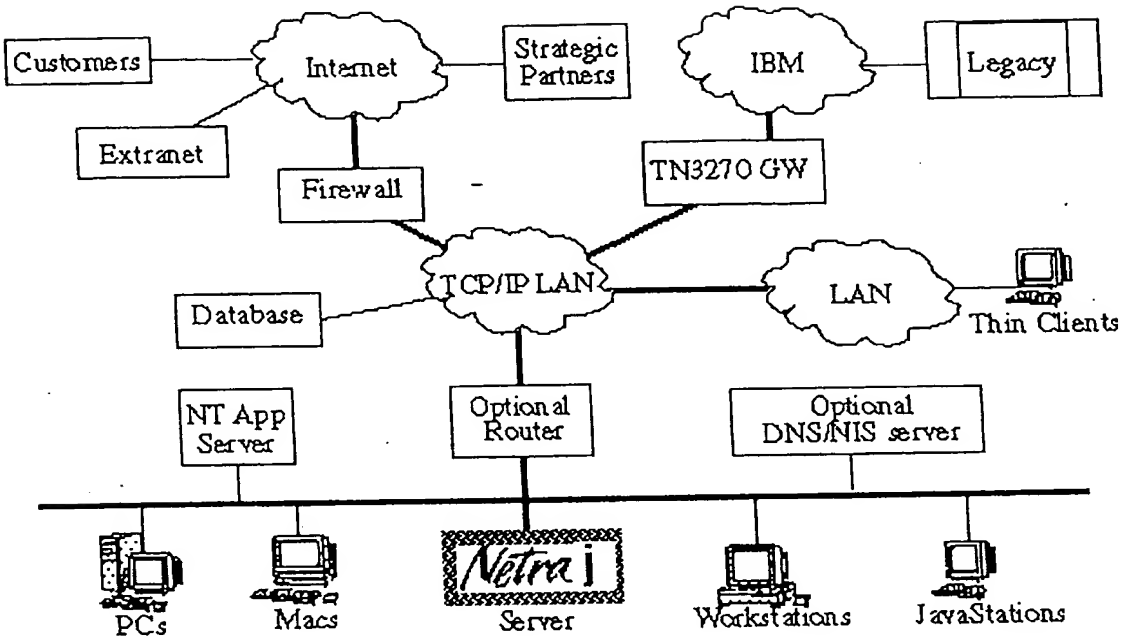

Figure ~~1AM~~ 49

OIPE
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Solaris ISP Server Bundle

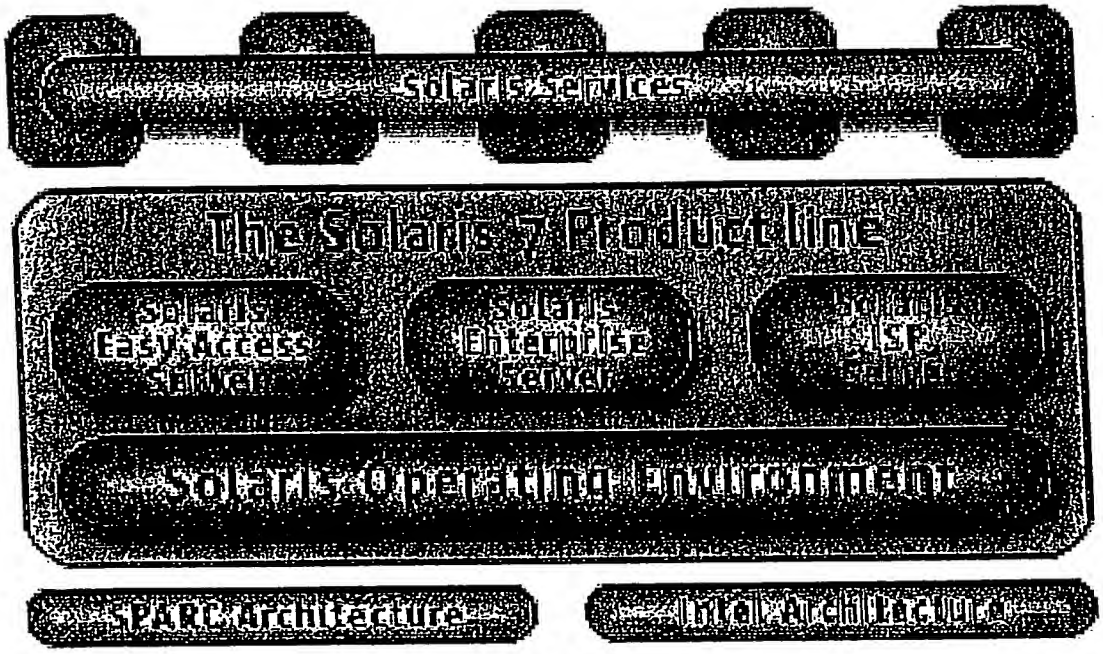

Figure 49AN

OIPE
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Development & Testing Tools

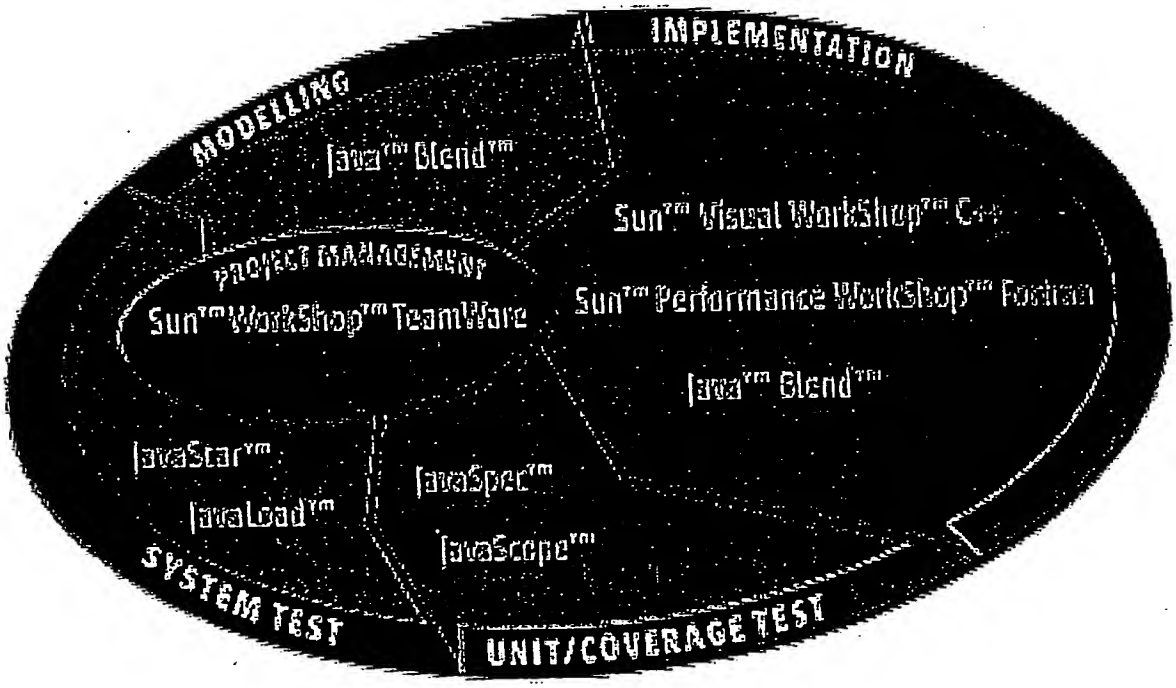

Figure 1A0

50

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MAR 0 3 2003
TECH CENTER 2100

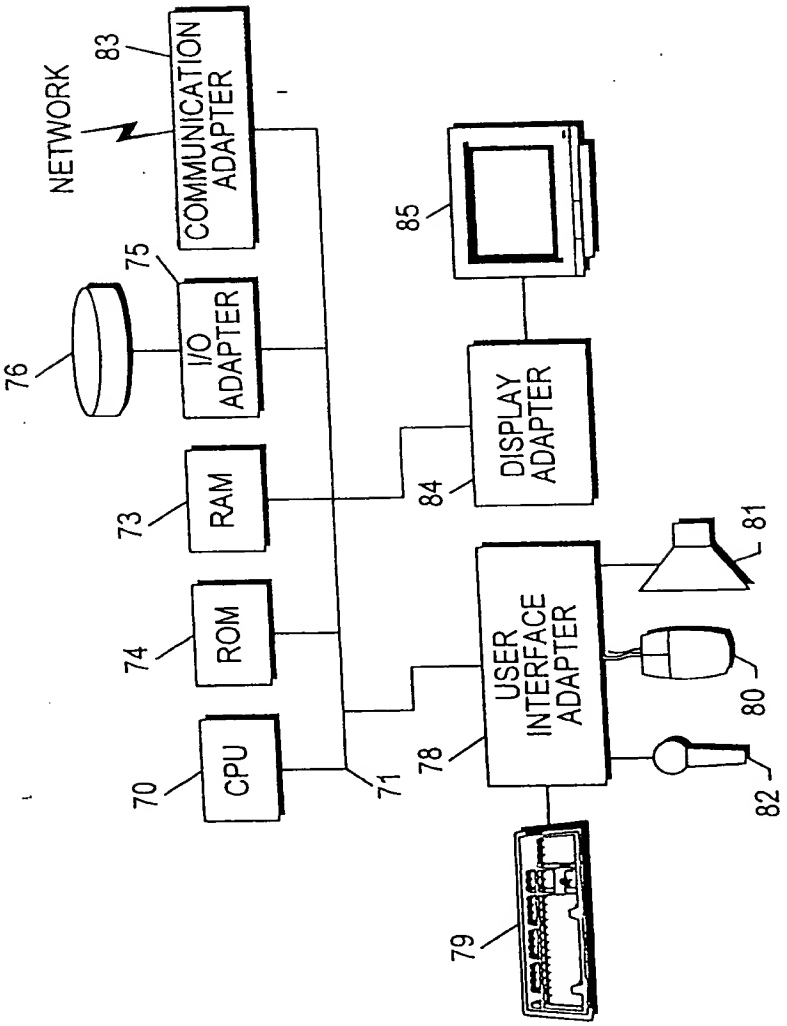

Figure 2A

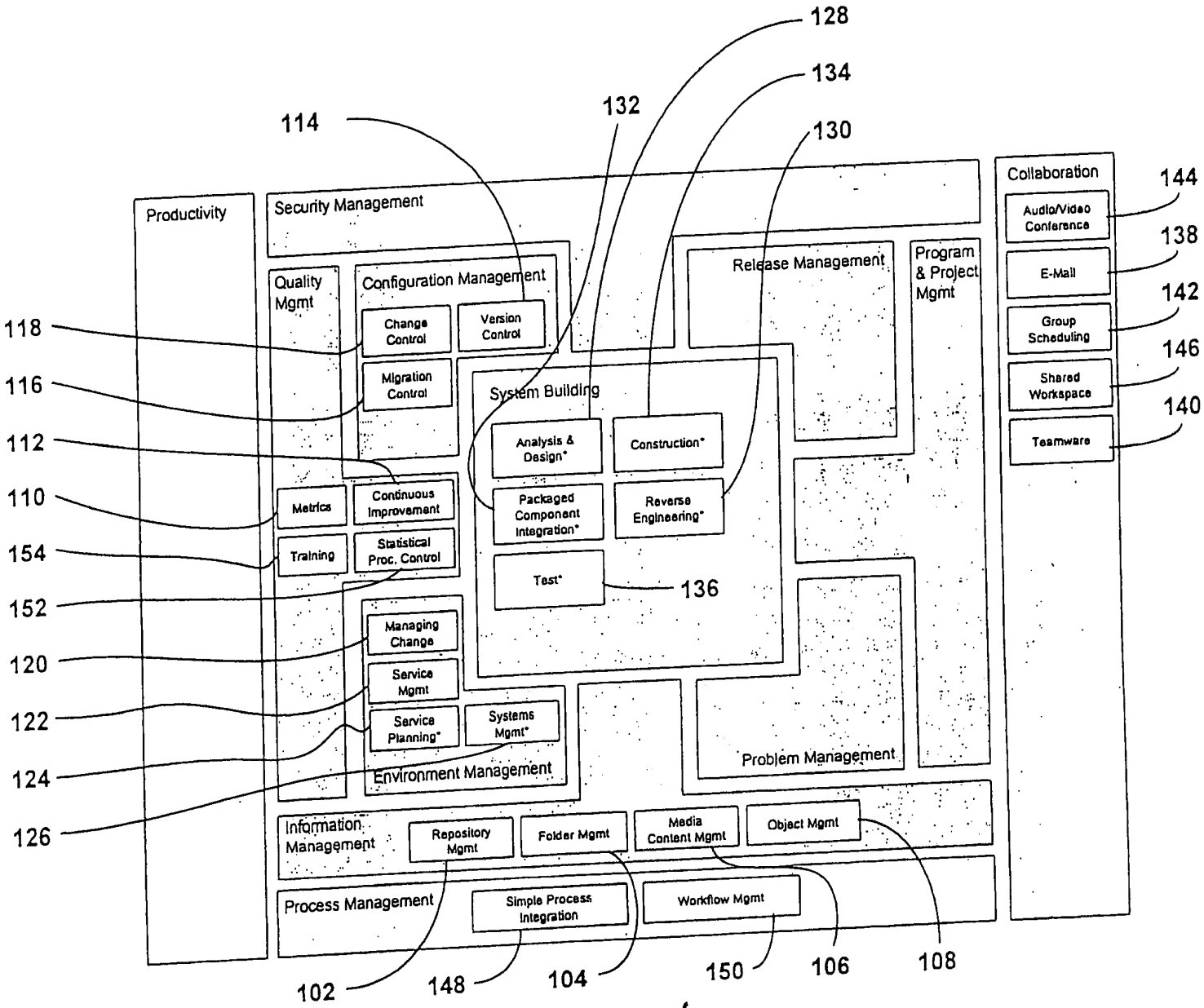

Figure 2B

PATENT & TRADEMARK OFFICE
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JC157

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MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

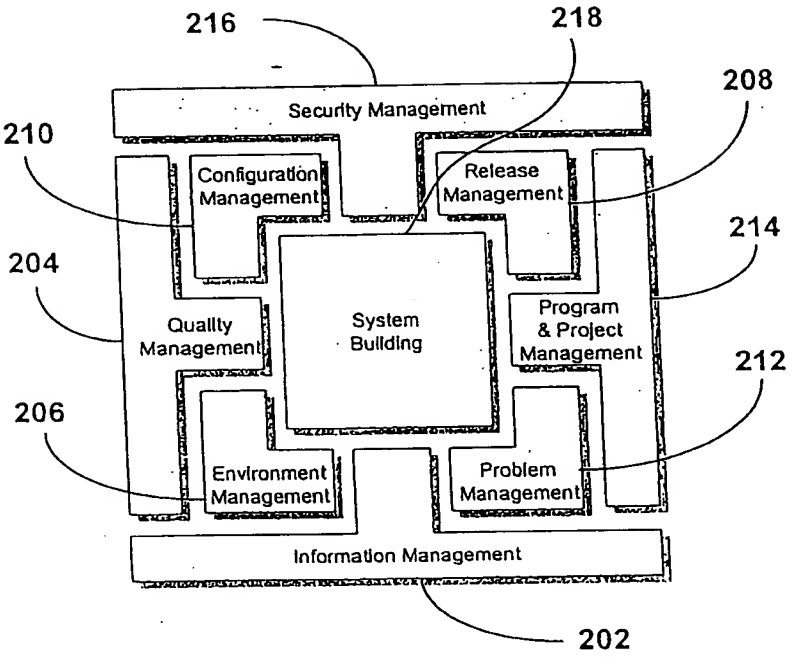

Figure 2C

OIPE
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PATENT & TRADEMARK OFFICE
SC157

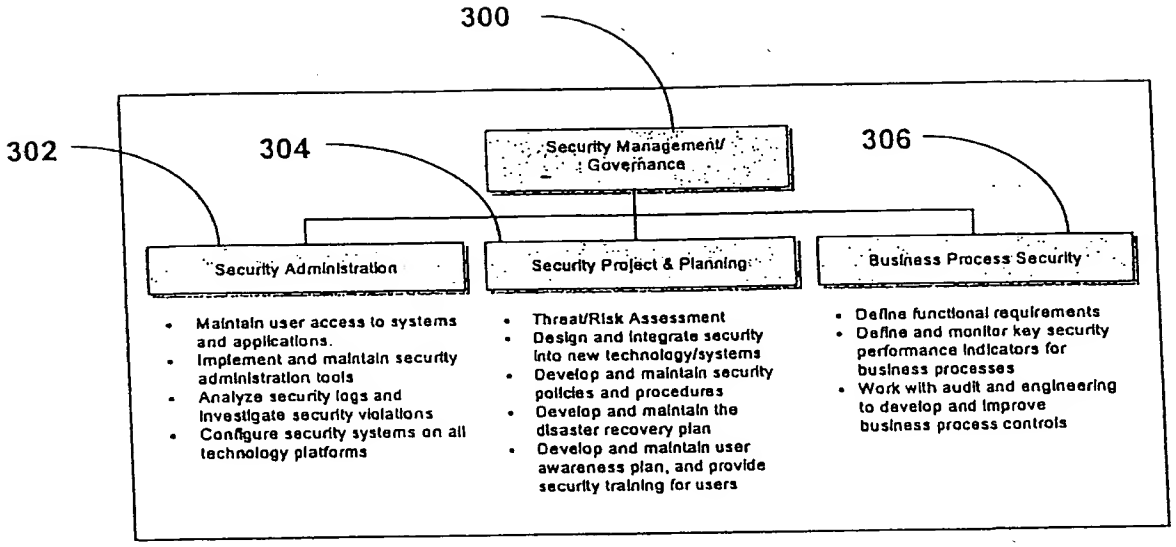

Figure 3 54

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

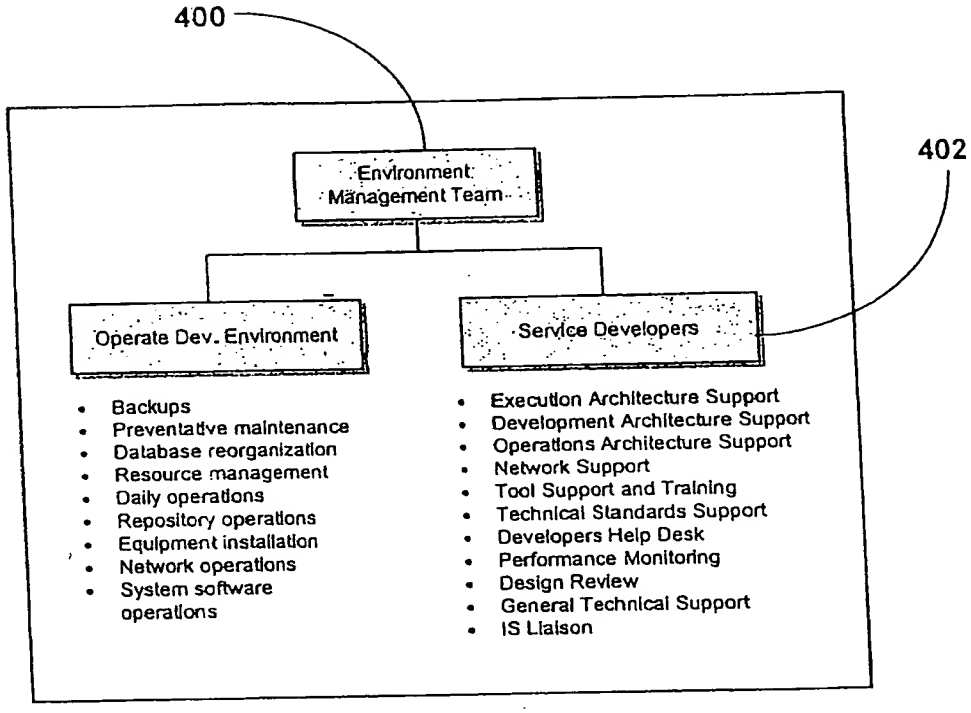

Figure 4 55

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

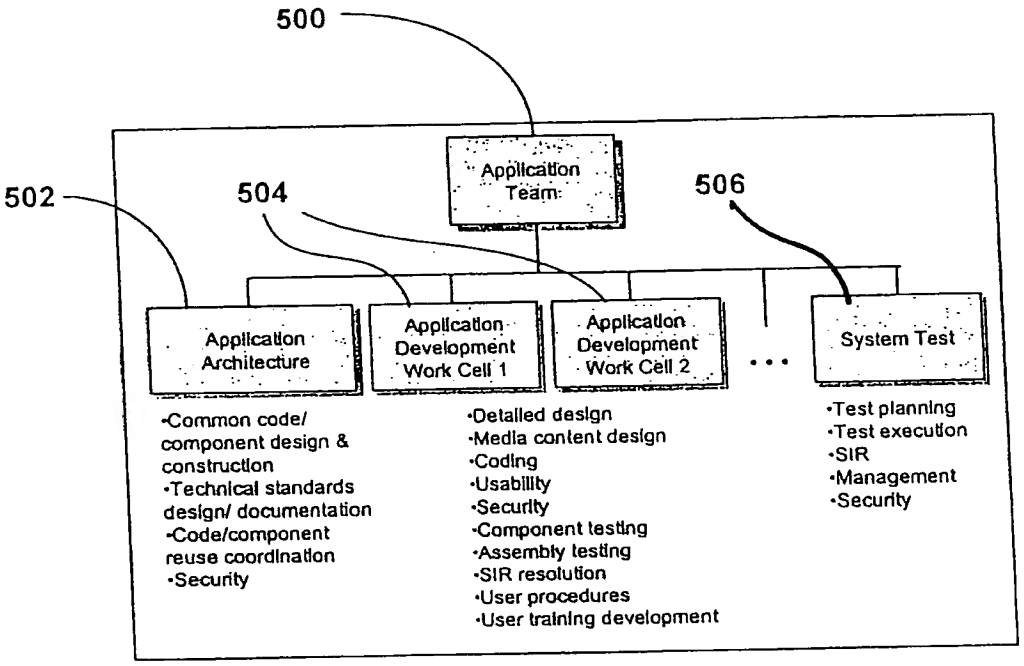

Figure 5 56

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

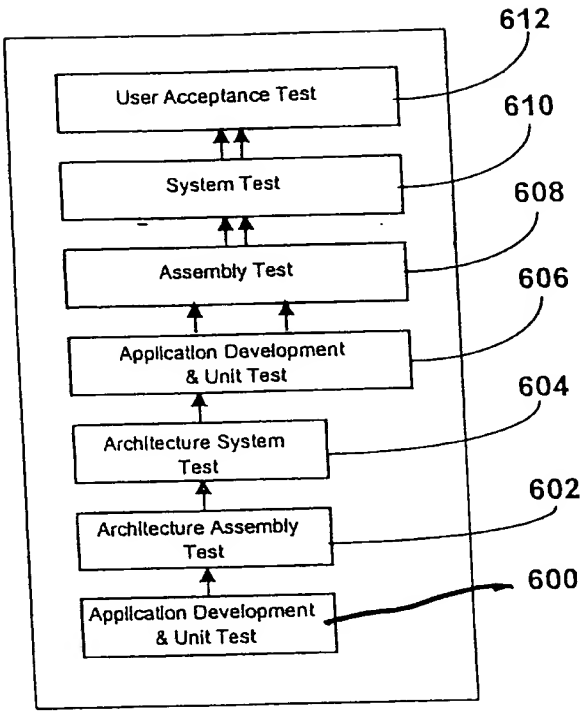

Figure 6

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MAR 0 3 2003
PATENT & TRADEMARK OFFICE
3C157

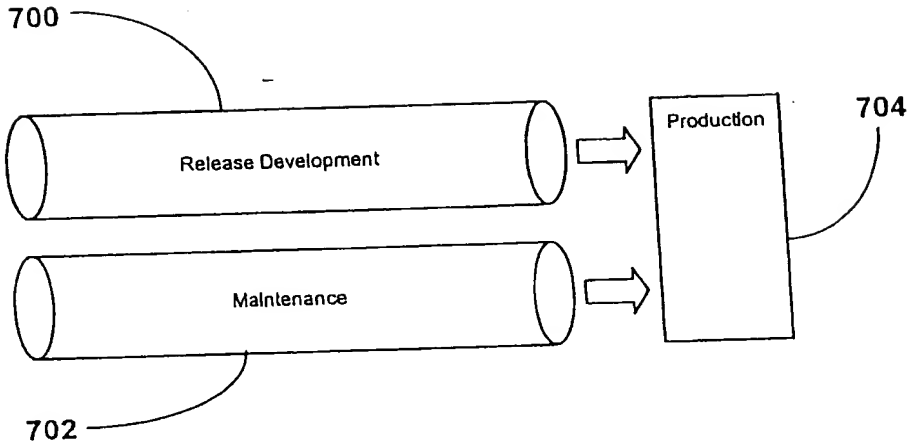

Figure 7 58

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

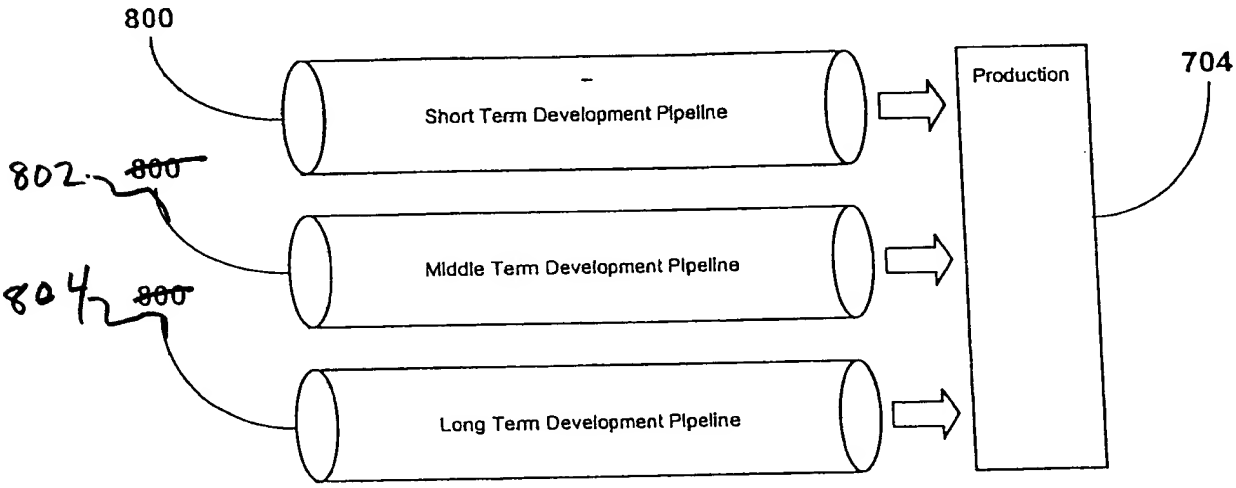

Figure 8 59

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC17

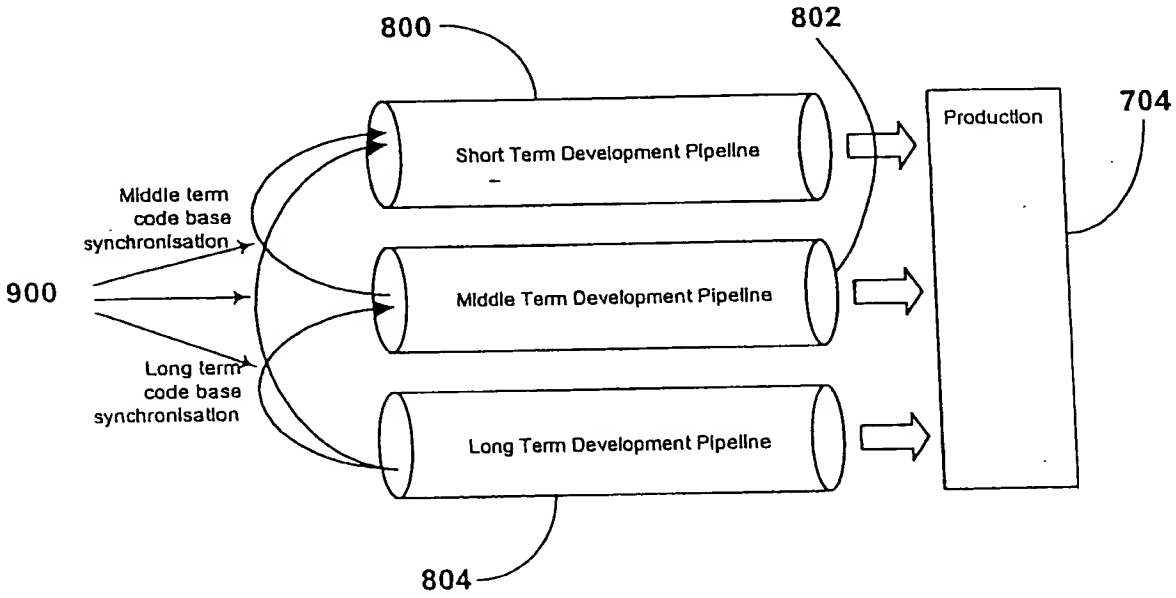

Figure 9 60

O I P E
MAR C 3 2003
PATENT & TRADEMARK OFFICE

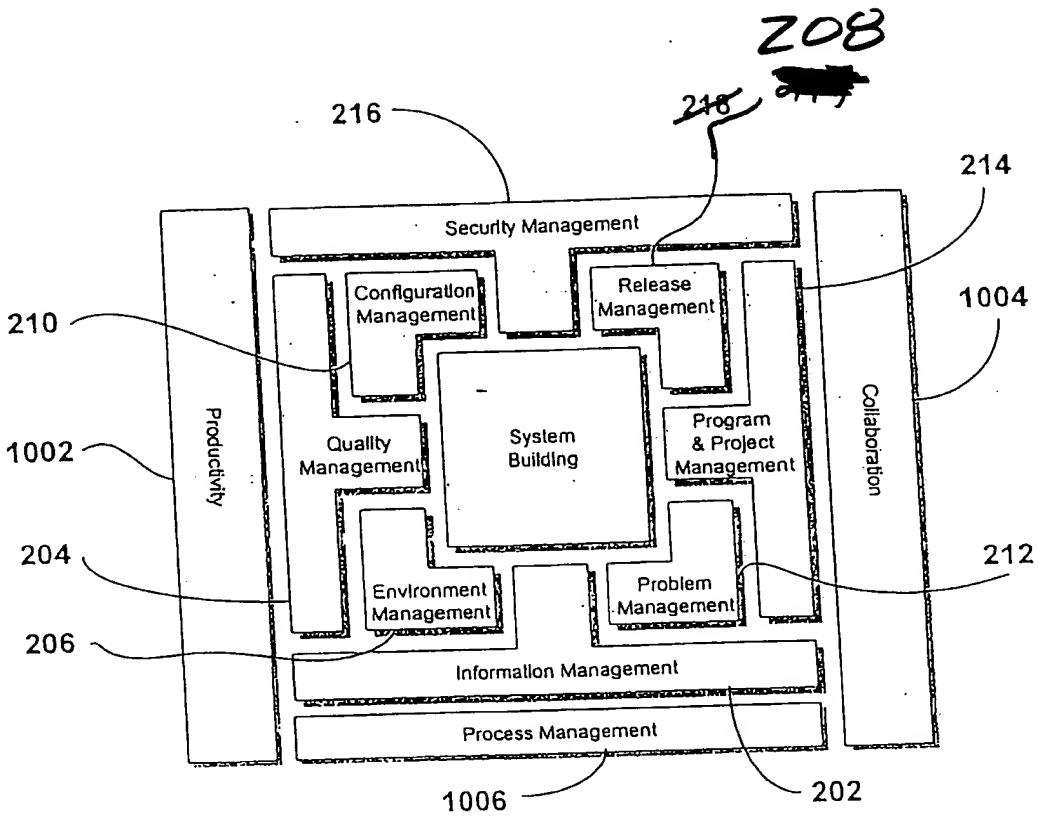

Figure 10

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

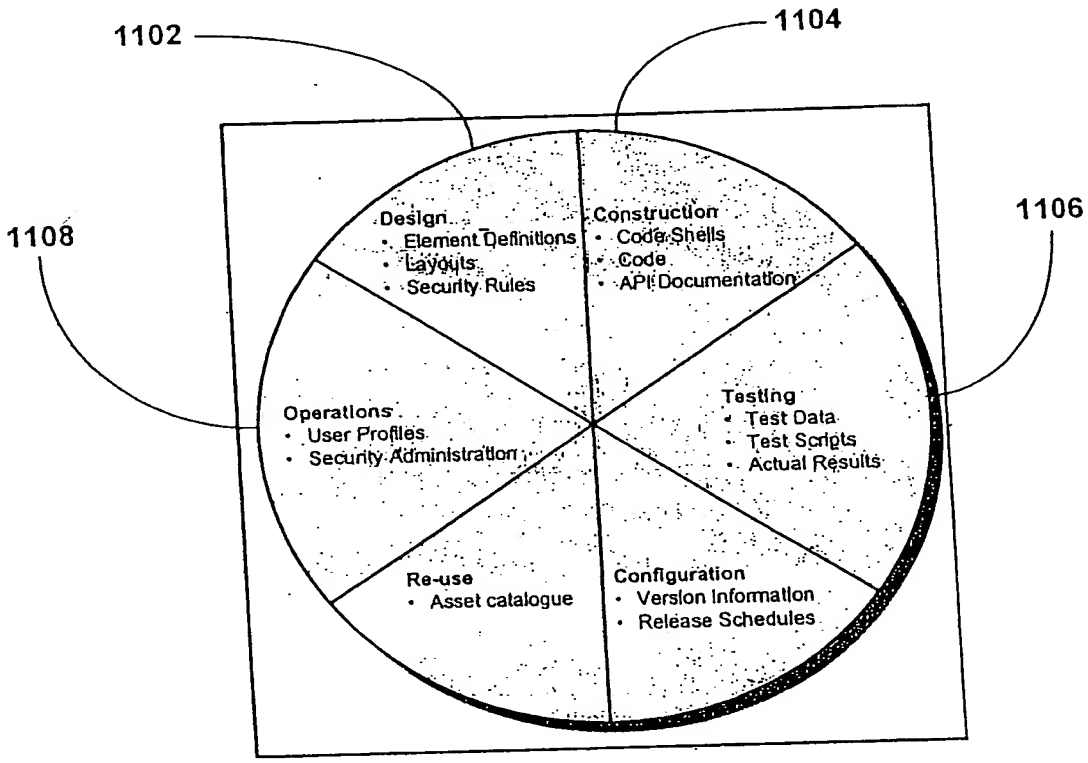

Figure 11

OIPE JC157
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

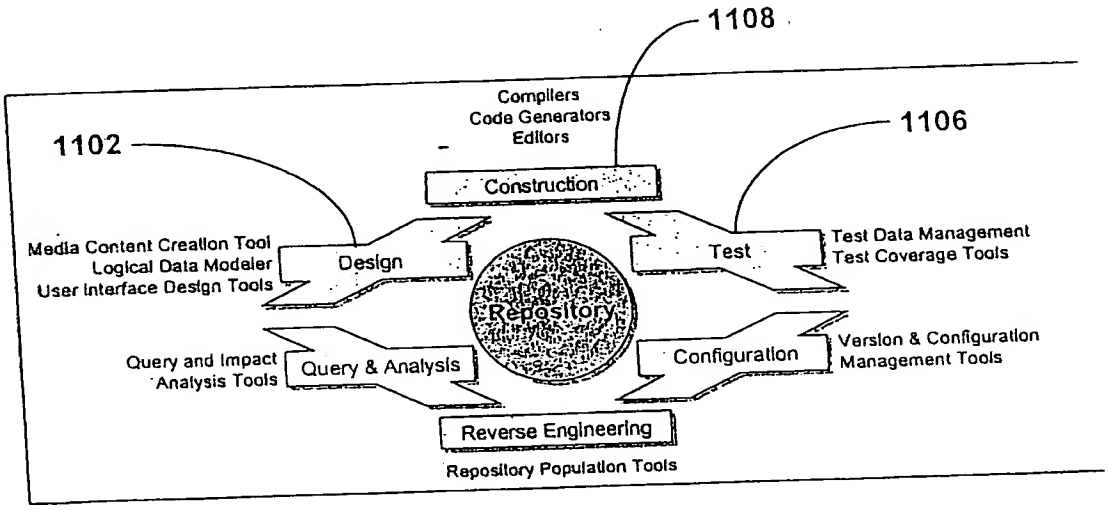

Figure 12

OIPE
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Fig. 64A

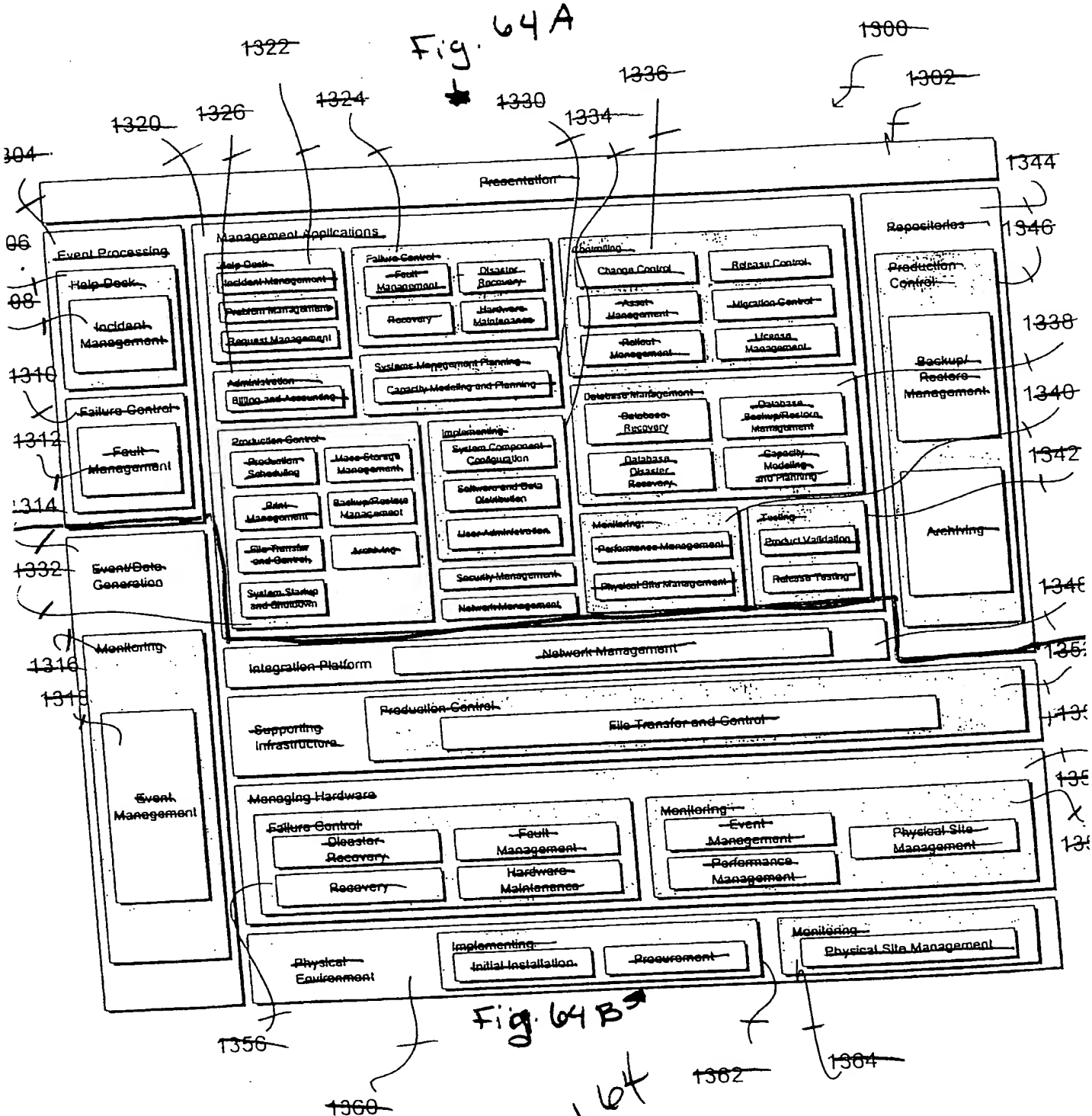

Fig. 64B

Figure 64

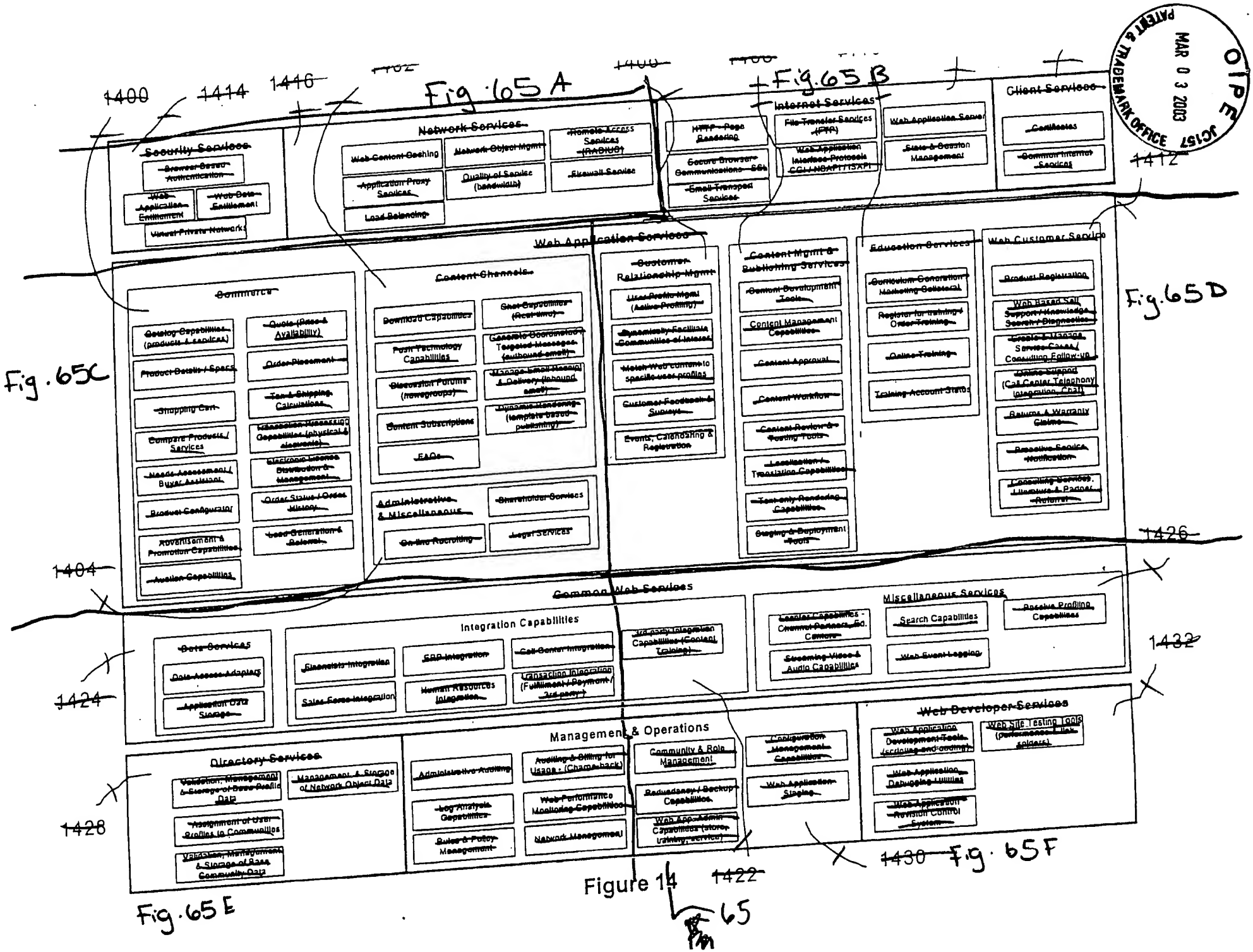
1400
1414
1446
1402
1410
1408
1412
Security Services
Browser-Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks
Network Services
Web Content Caching
Application Proxy Services
Load Balancing
Network Object Mgmt
Quality of Service (bandwidth)
Remote Access Services (RADIUS)
Firewall Service
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services
Internet Services
File Transfer Services (FTP)
Web Application Interface Protocols CGI / NSAPI / ISAPI
Web Application Server
State & Session Management
Client Services
Certificates
Common Internet Services
Web Application Services
Commerce
Catalog Capabilities (products & services)
Product Details / Specs
Shopping Cart
Compare Products / Services
Needs Assessment / Buyer Assistant
Product Configurator
Advertisement & Promotion Capabilities
Auction Capabilities
Quote (Pass & Availability)
Order Placement
Tax & Shipping Calculations
Transaction Processing Capabilities (physical & electronic)
Electronic License Distribution & Management
Order Status / Order History
Lead Generation & Referral
Content Channels
Download Capabilities
Push Technology Capabilities
Discussion Forums (newsgroups)
Content Subscriptions
FAQs
Chat Capabilities (Real-time)
Cassette Coordinator - Targeted Messages (outbound email)
Manage Email Receipt & Delivery (inbound email)
Dynamic Rendering (template based publishing)
Administrative & Miscellaneous
Shareholder Services
Online Recruiting
Legal Services
Customer Relationship Mgmt
User Profile Mgmt (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web Content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration
Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Approval
Content Workflow
Content Review & Testing Tools
Localization / Translation Capabilities
Taxonomy Rendering Capabilities
Staging & Deployment Tools
Education Services
Curriculum Generation / Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
Web Customer Service
Product Registration
Web Based Self-Support / Knowledge Search / Diagnostics
Create & Manage Service Cases / Consulting Follow-up
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Forecasting Services, Literature & Package Returns
Fig. 65A
Fig. 65B
Fig. 65C
Fig. 65D
1404
1426
Common Web Services
Data Services
Data Access Adapters
Application Data Storage
Integration Capabilities
Financials Integration
ERP Integration
Call Center Integration
3rd-party Integration Capabilities (Content, Training)
Sales Force Integration
Human Resources Integration
Transaction Integration (Fulfillment / Payment / 3rd party)
Miscellaneous Services
Location Capabilities - Channel Partners, Ed. Centers
Search Capabilities
Personal Profiling Capabilities
Streaming Video & Audio Capabilities
Web Event Logging
1424
1432
Directory Services
Validation, Management & Storage of Base Profile Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data
Management & Storage of Network Object Data
1428
Management & Operations
Administrative Auditing
Log Analysis Capabilities
Rules & Policy Management
Auditing & Billing for Usage - (Chargeback)
Web Performance Monitoring Capabilities
Network Management
Community & Role Management
Redundancy / Backup Capabilities
Web App Admin Capabilities (store, training, service)
Configuration Management Capabilities
Web Application Singing
Web Developer Services
Web Application Development Tools (scripting and coding)
Web Site Testing Tools (performance / load testers)
Web Application Debugging Utilities
Web Application Revision Control System
1430
1422
Fig. 65E
Fig. 65F

Figure 14

65

OIPE
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JC157

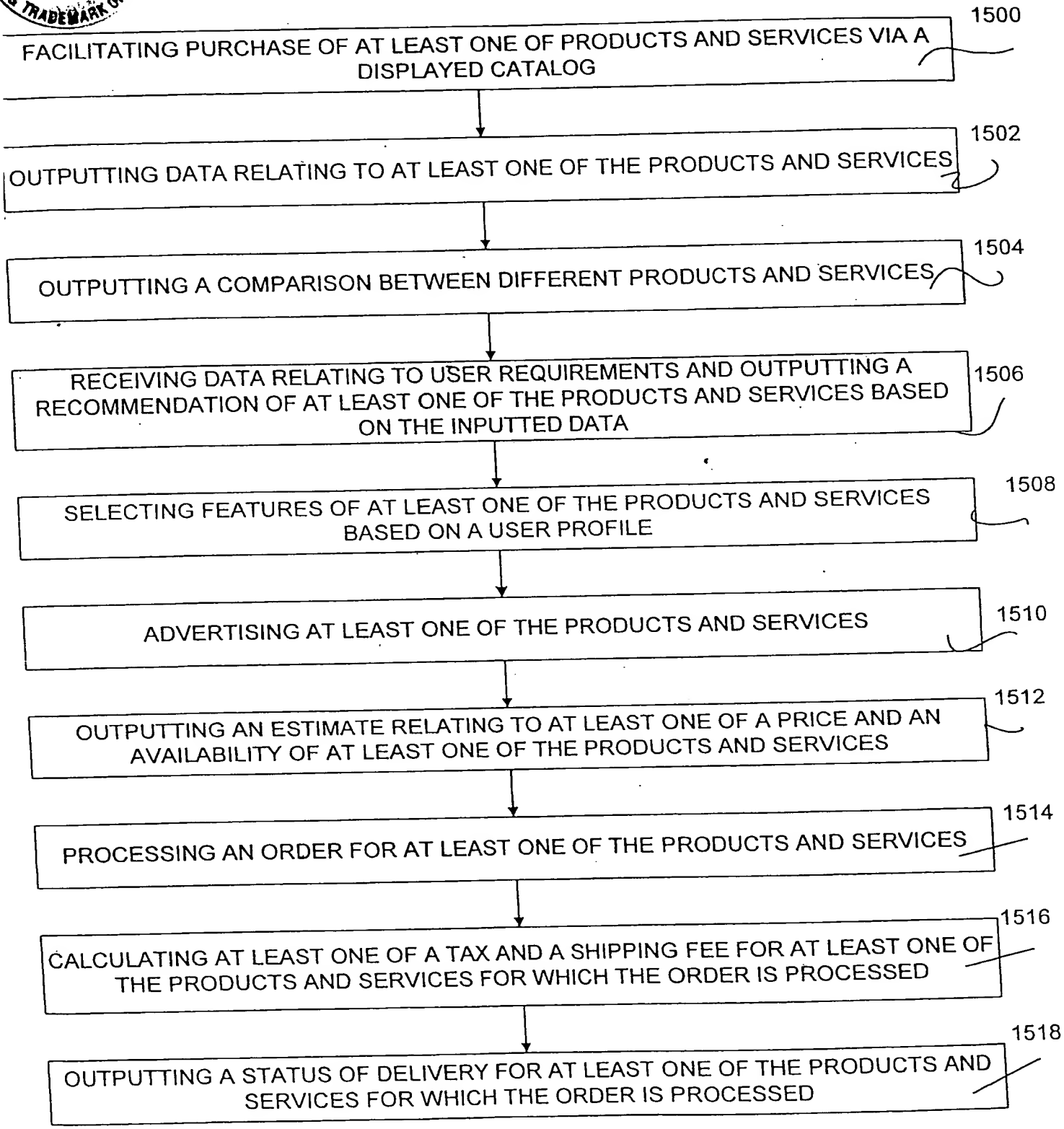

Figure 15

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

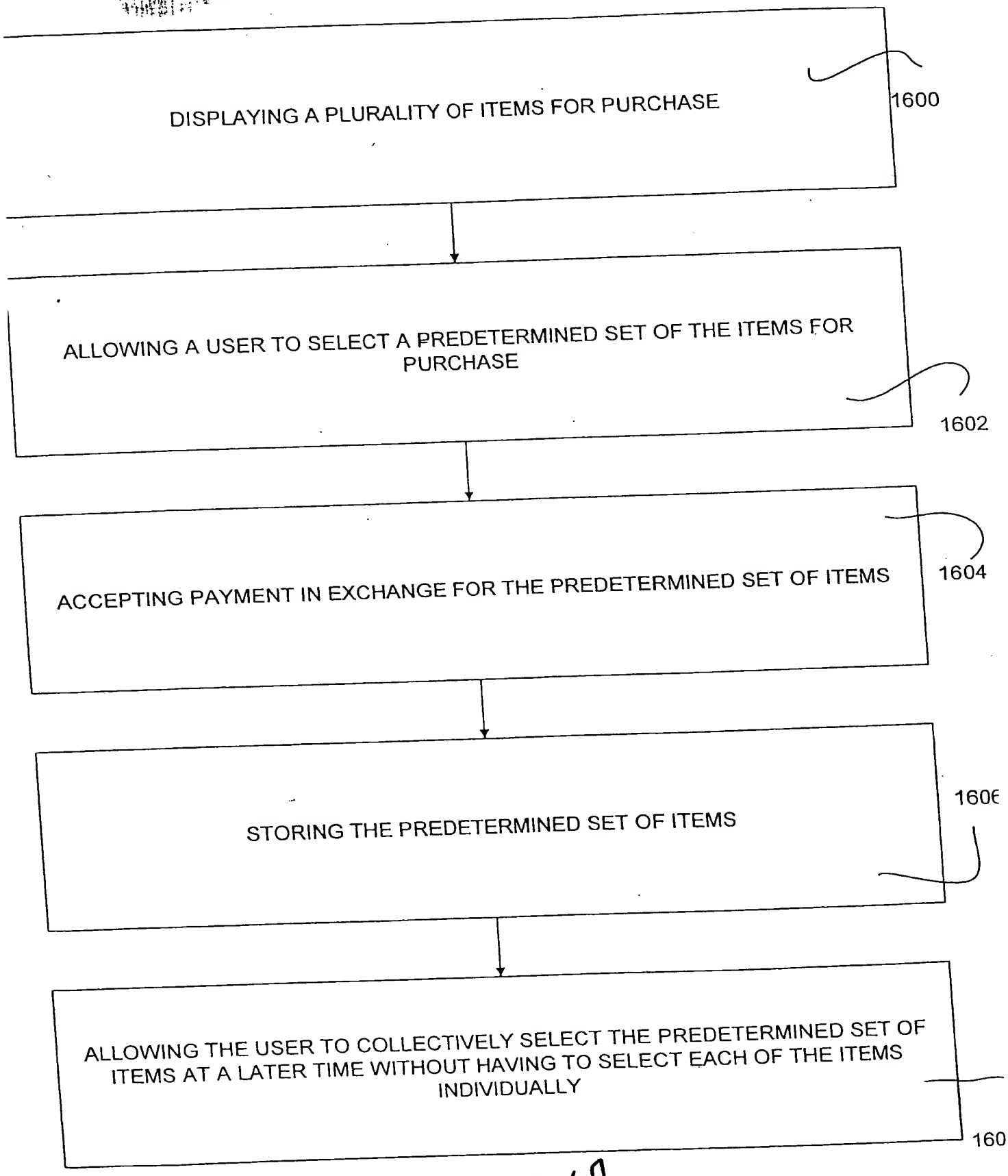

Figure 16 67

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC167

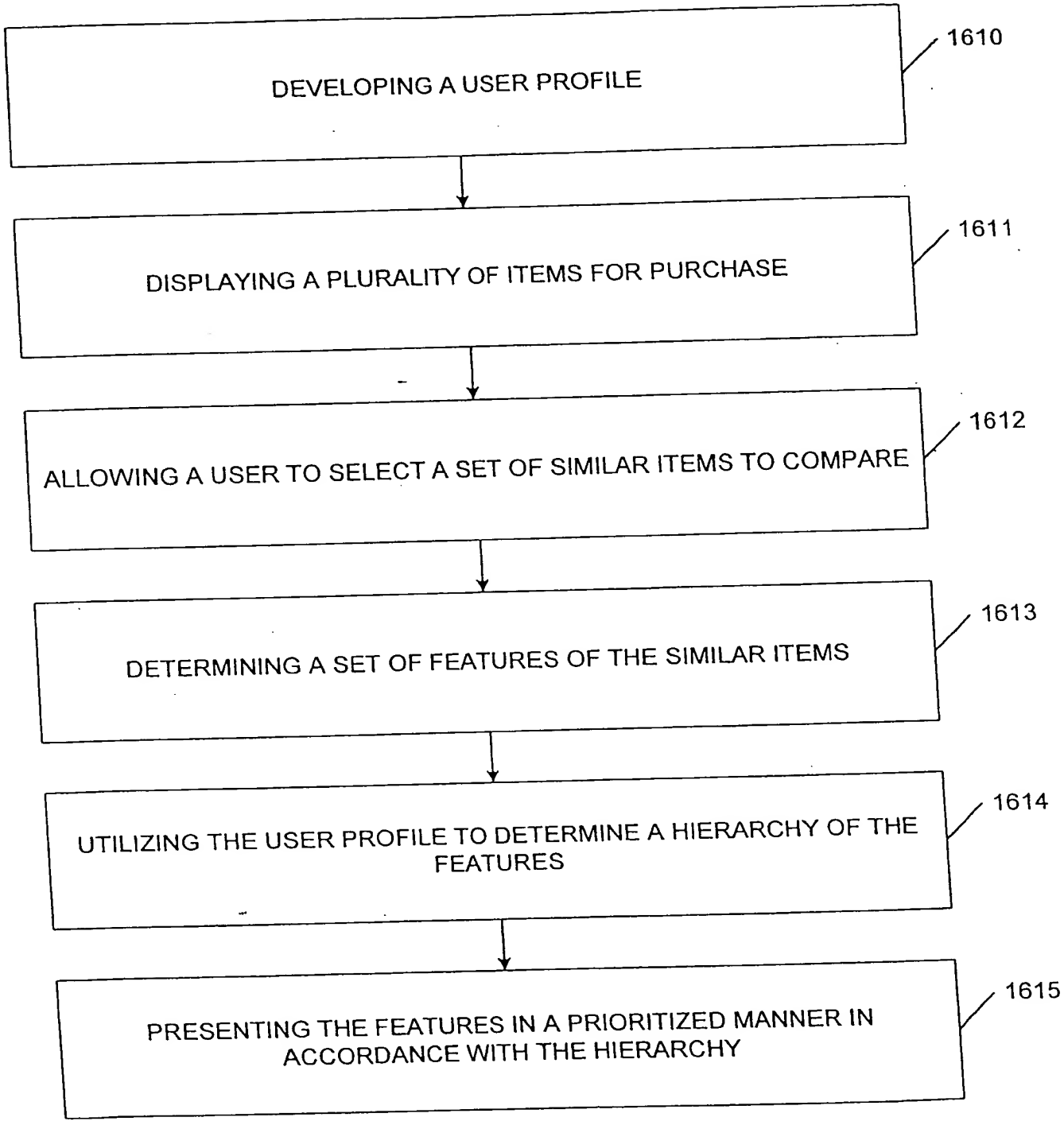

Figure 16A

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MAR 0 3 2003
PATENT & TRADEMARK OFFICE

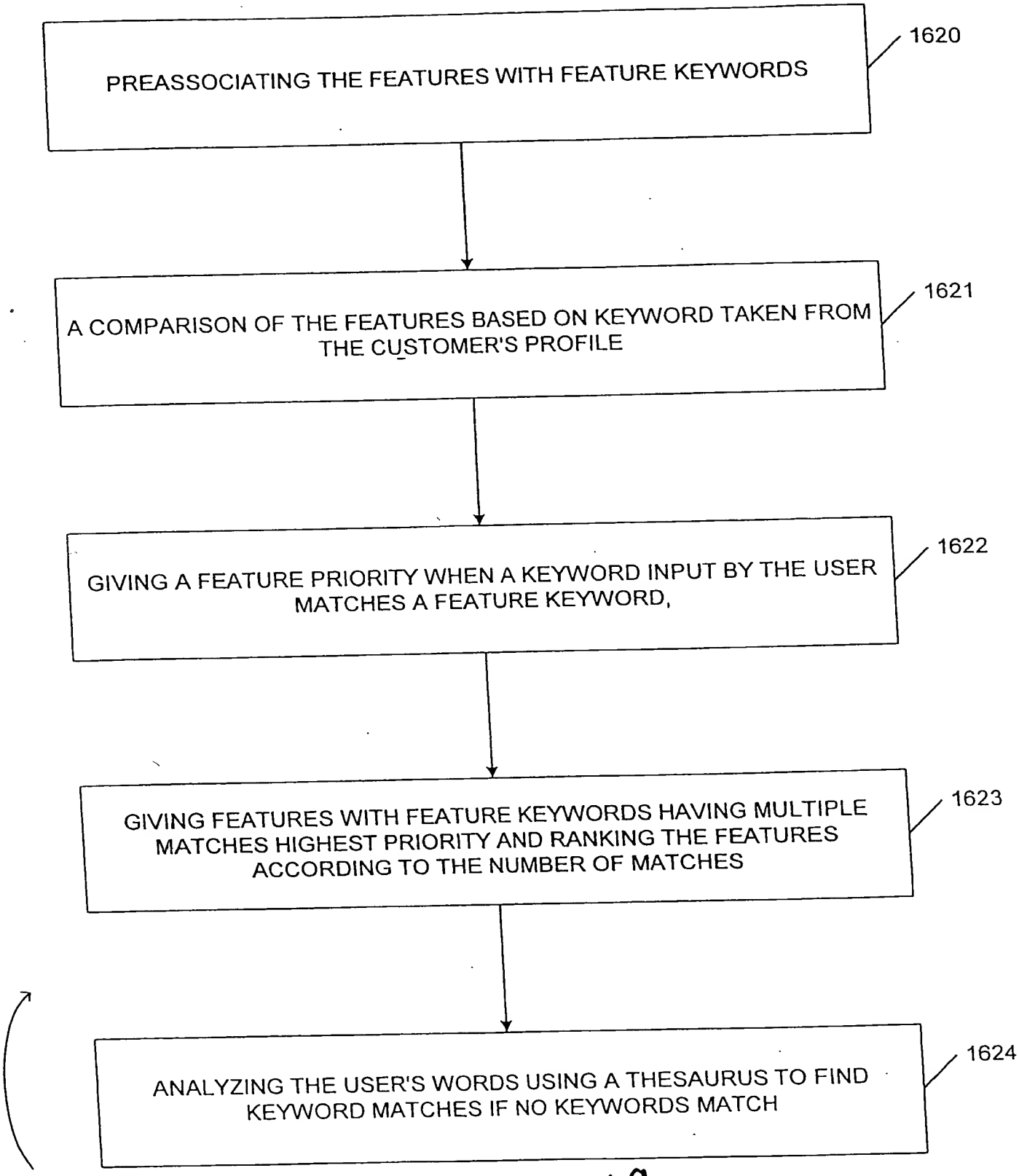

Figure 16B

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

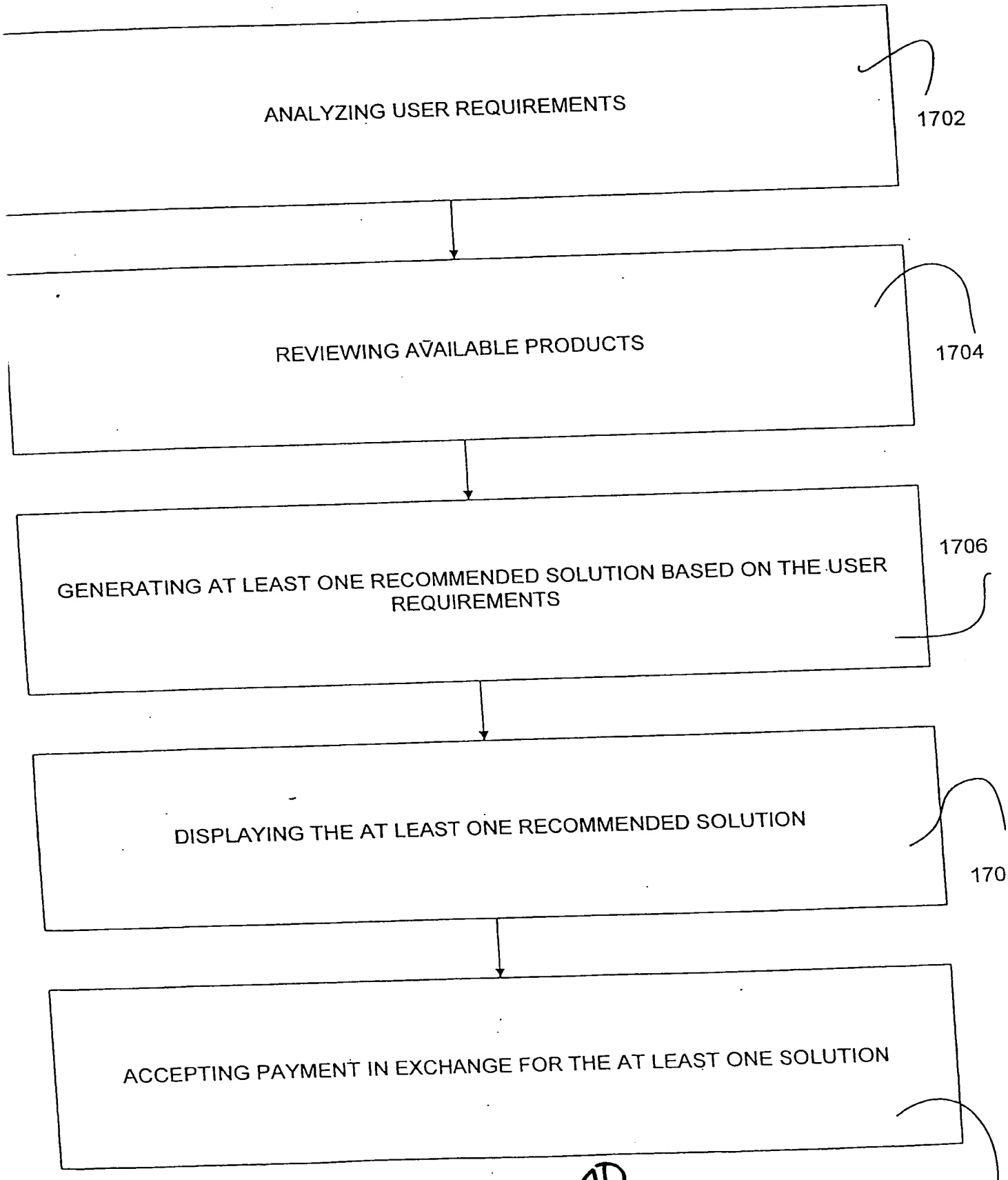

Figure 17 70

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

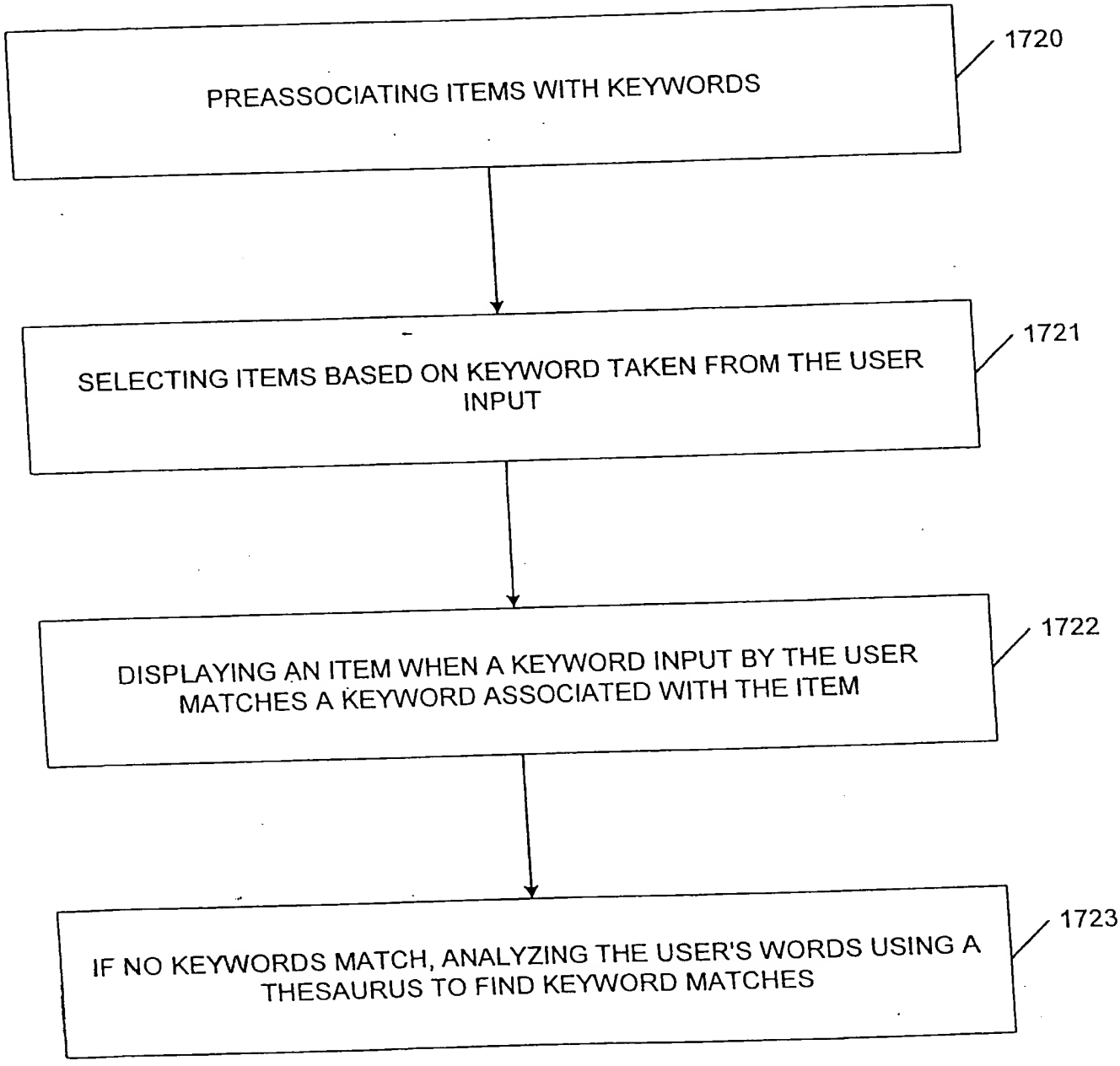

Figure 17A

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

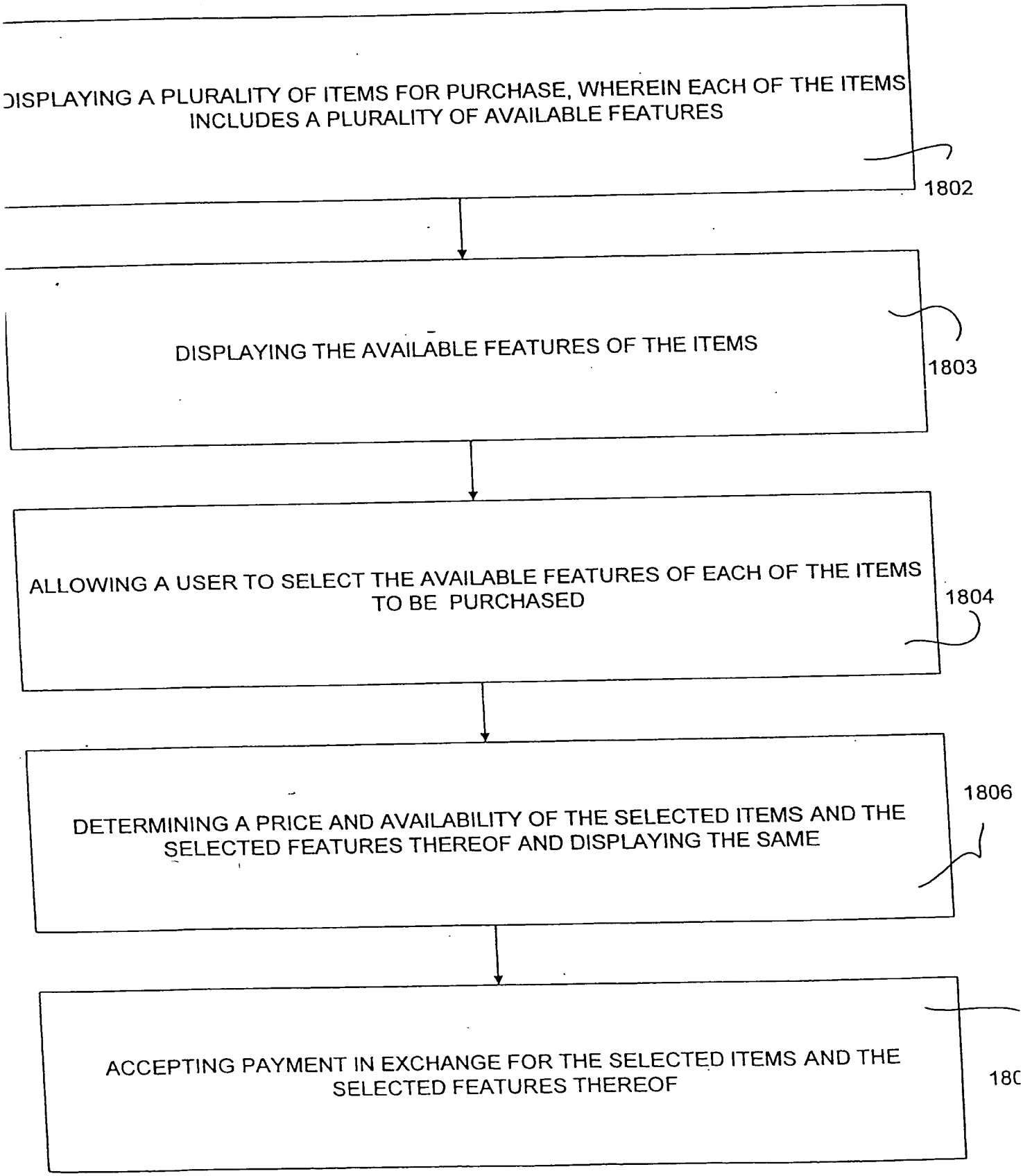

Figure 18

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
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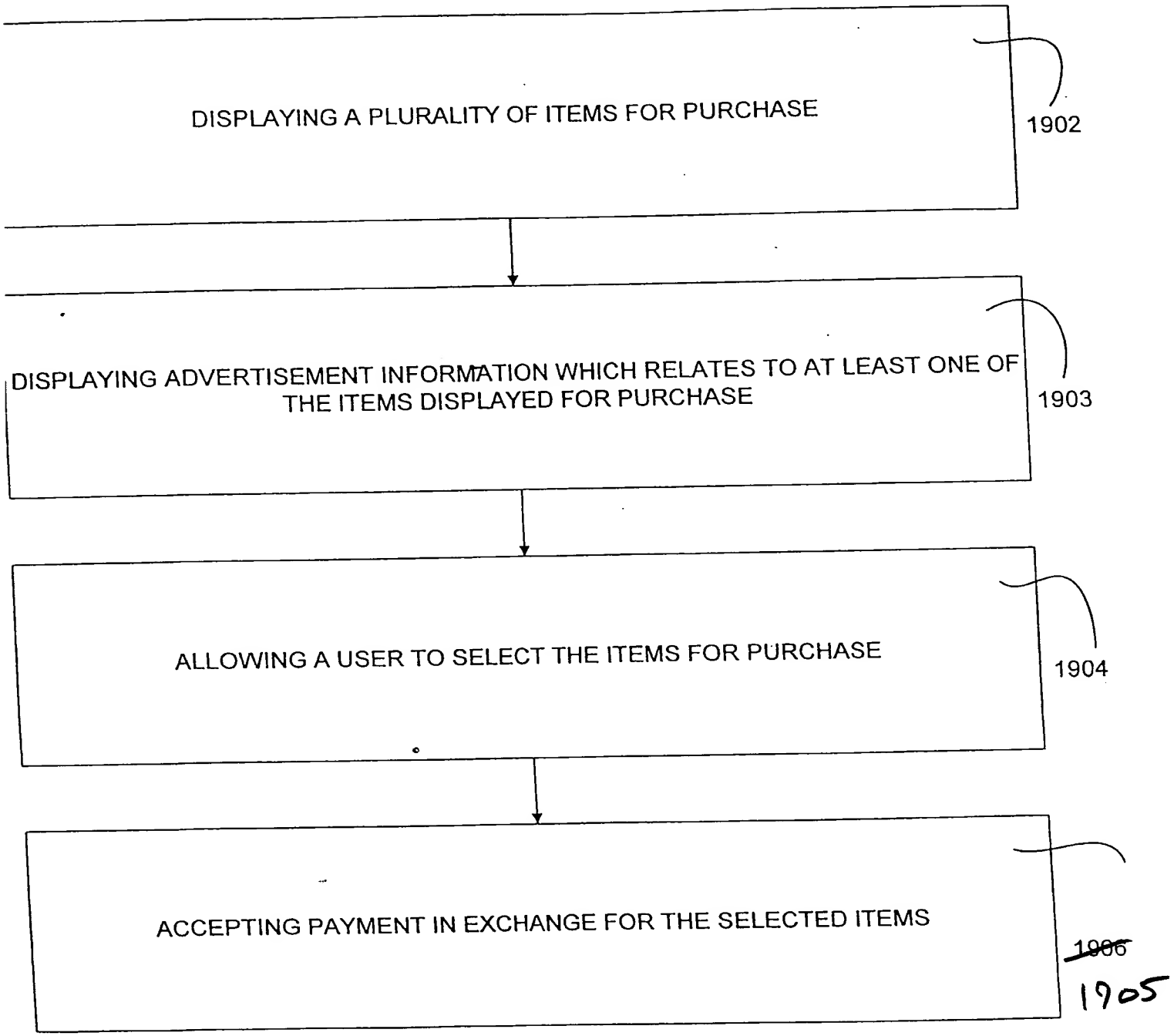
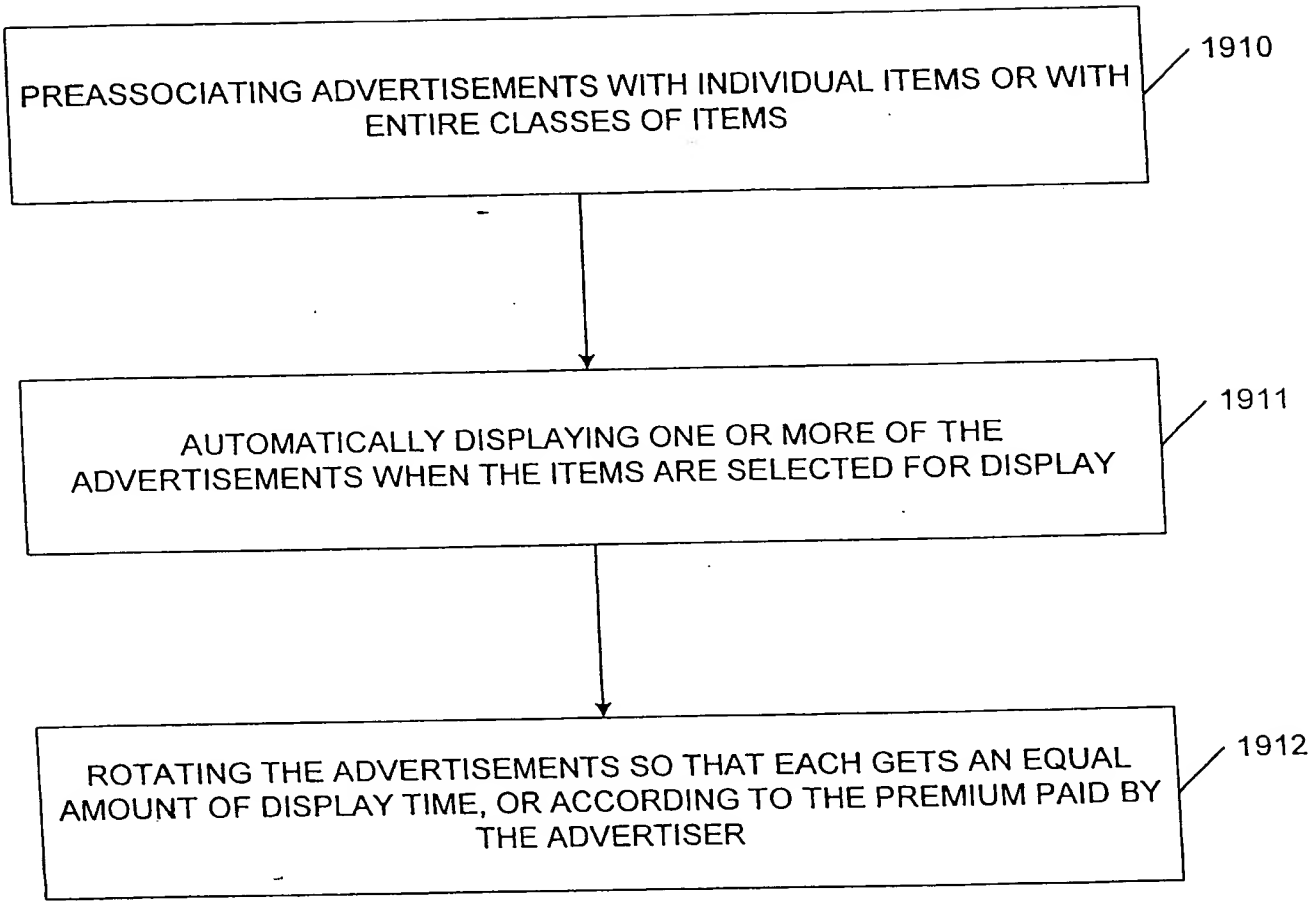


Figure ~~19~~ 19

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE



74

Figure 19A

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

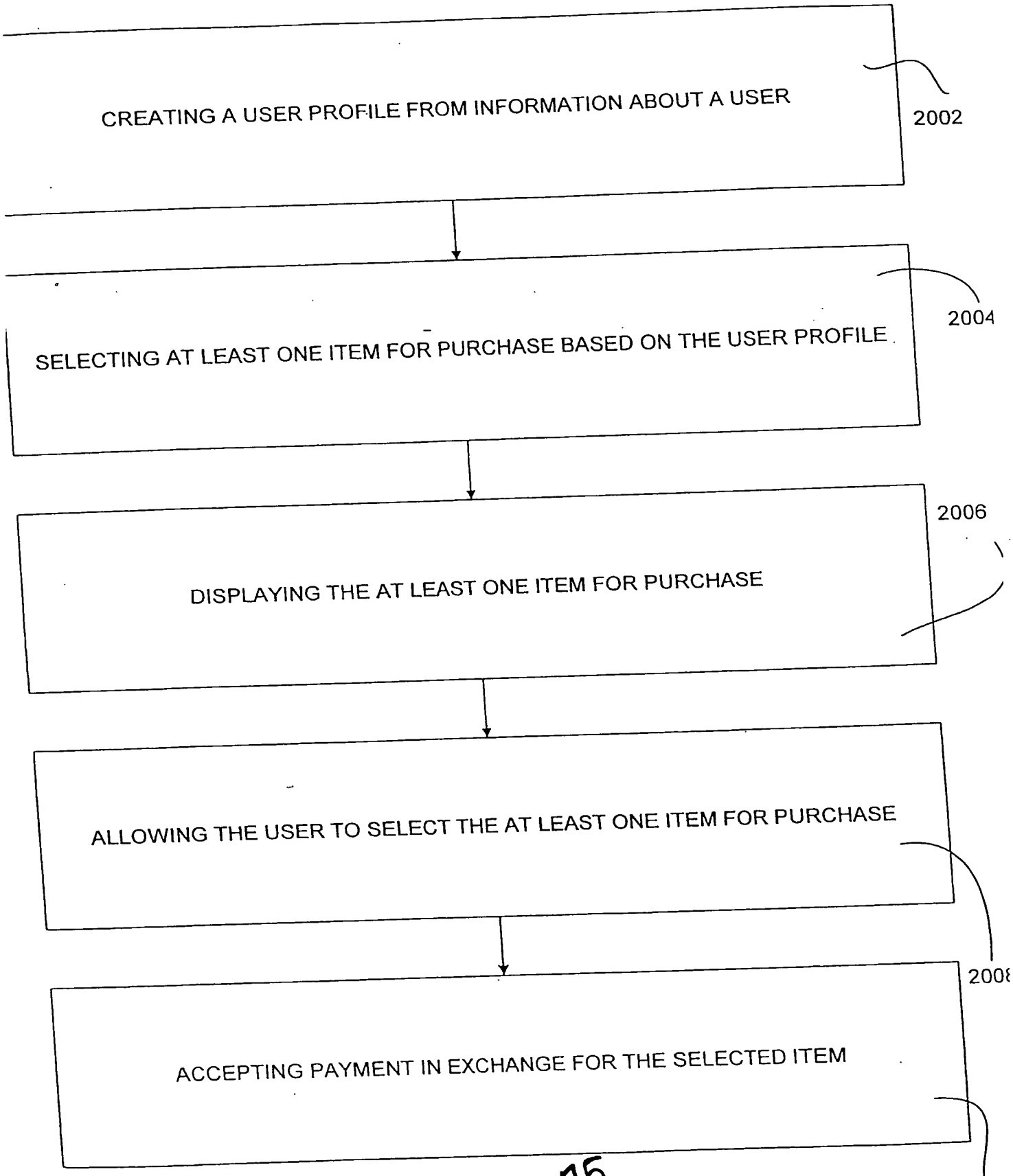


Figure 20

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

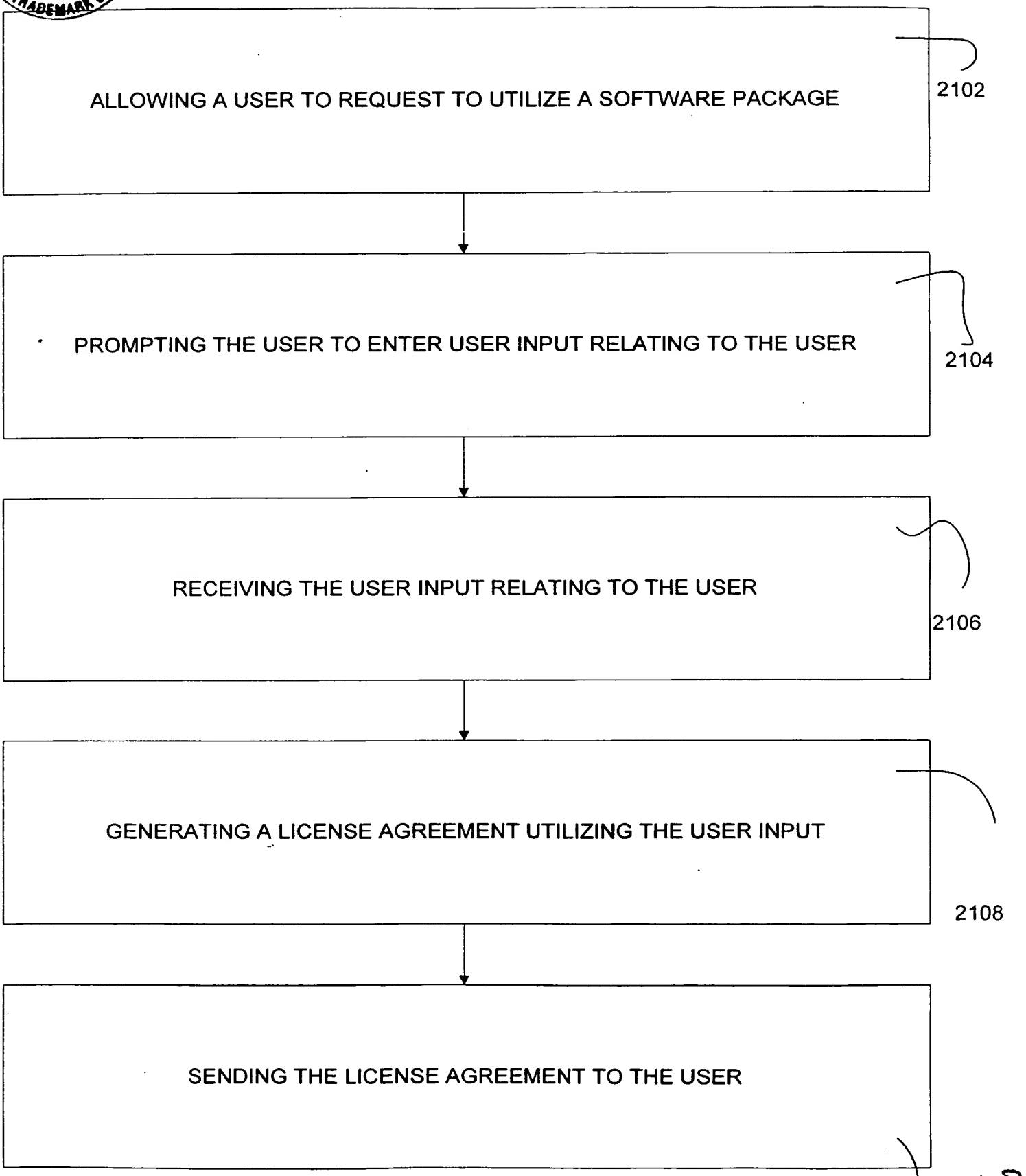


Figure ~~21~~ 76

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE

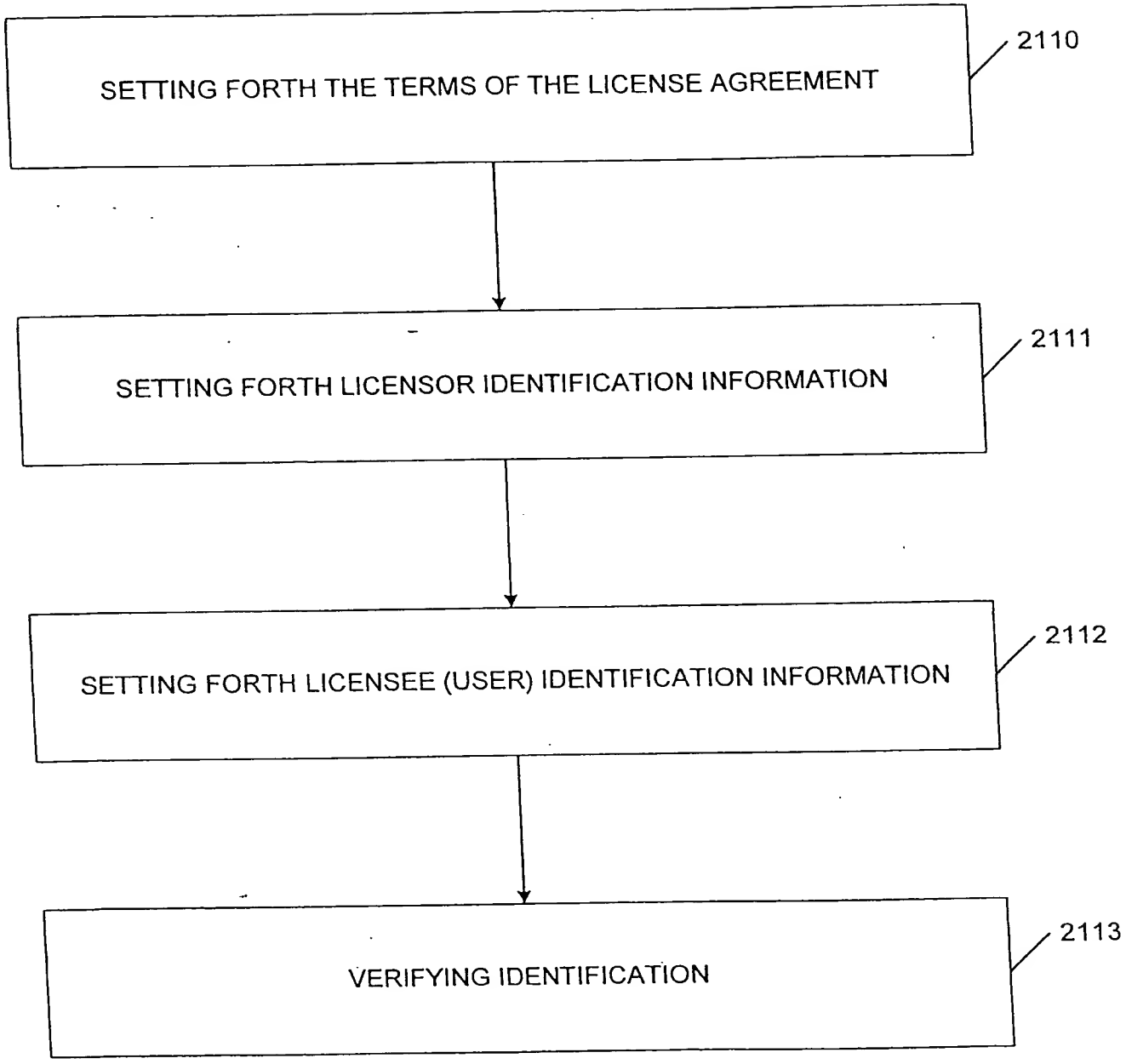


Figure 21A

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
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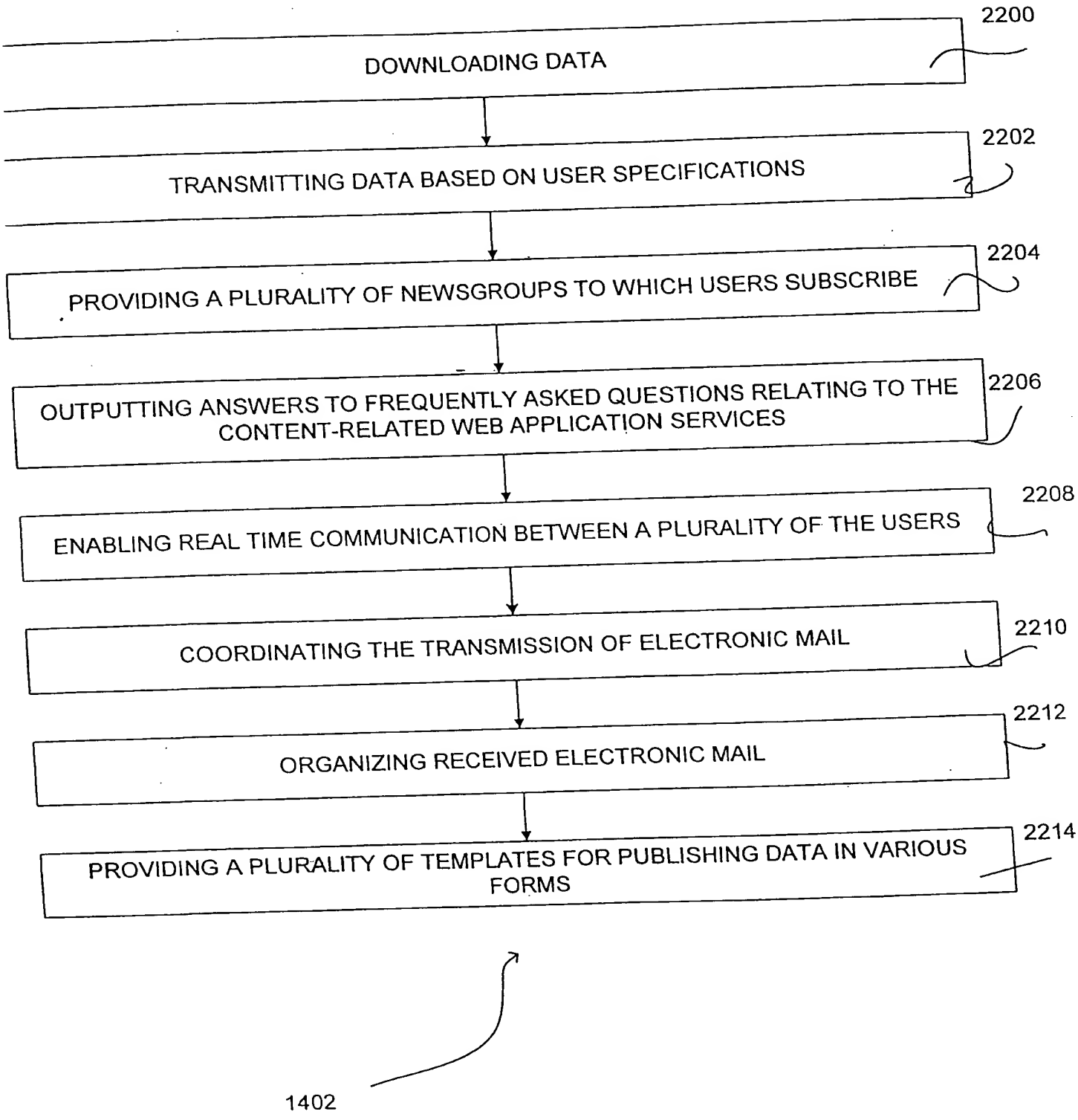

Figure 22

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

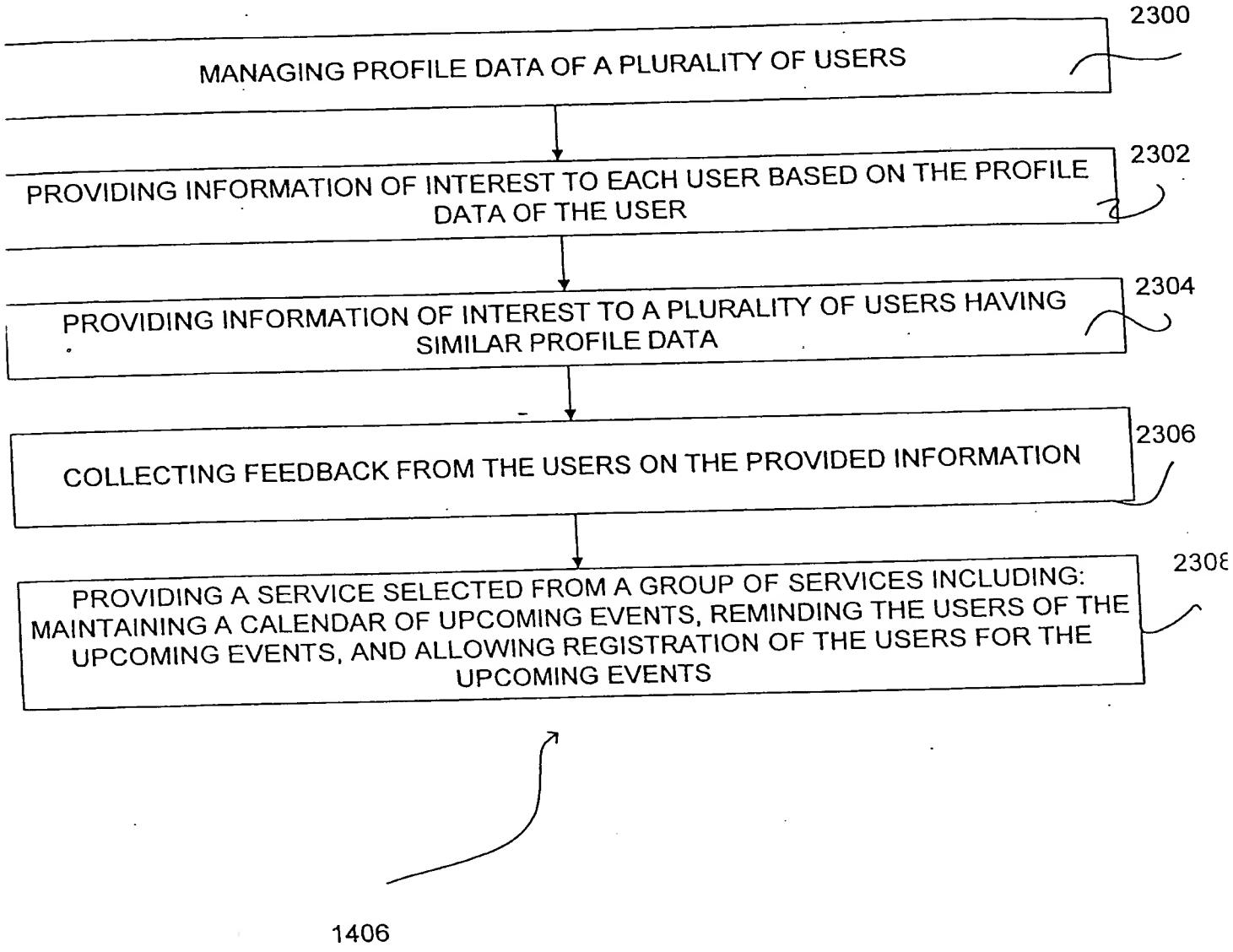

Figure 23

O.I.P.E
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC167

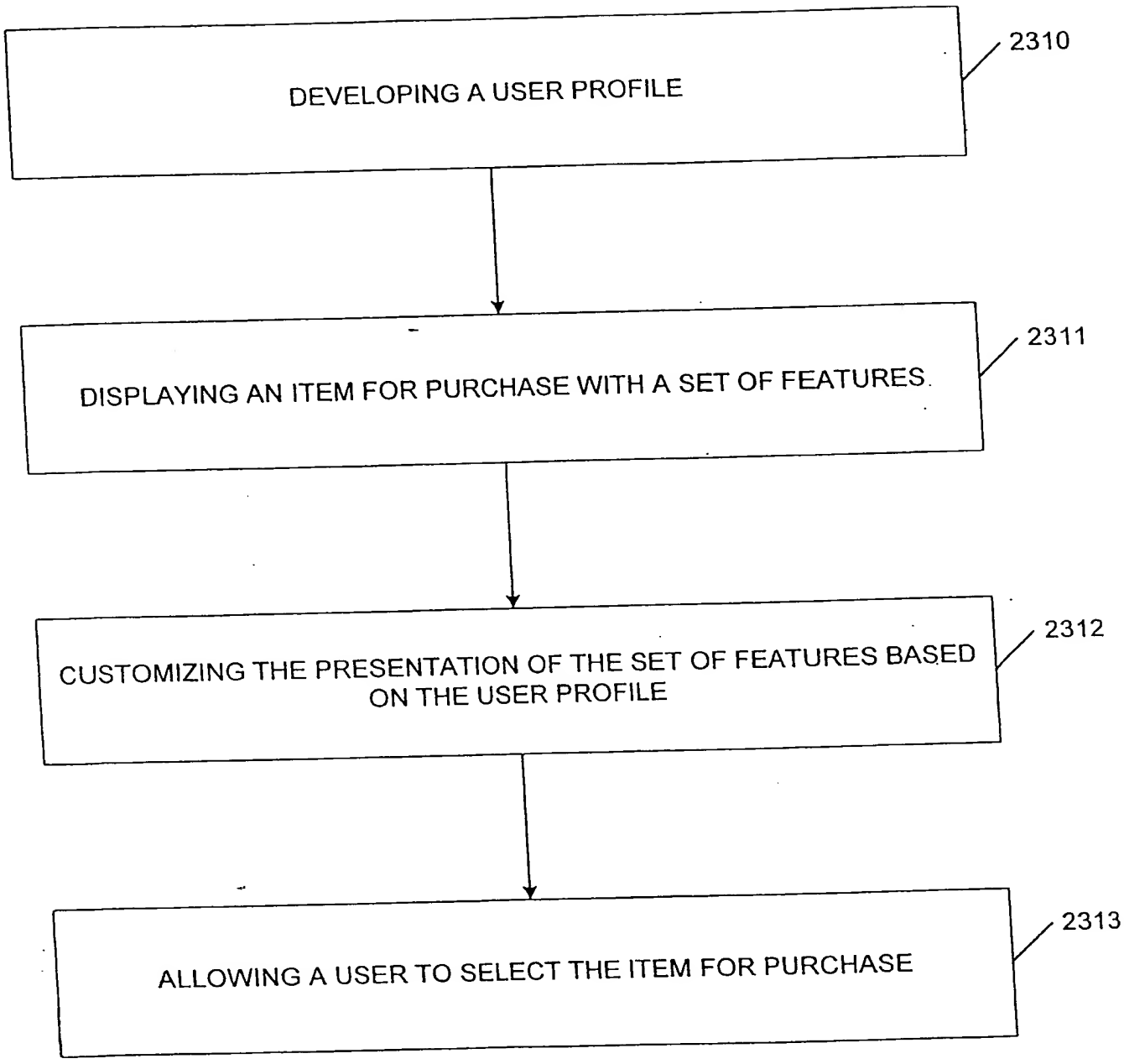

Figure 23A

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

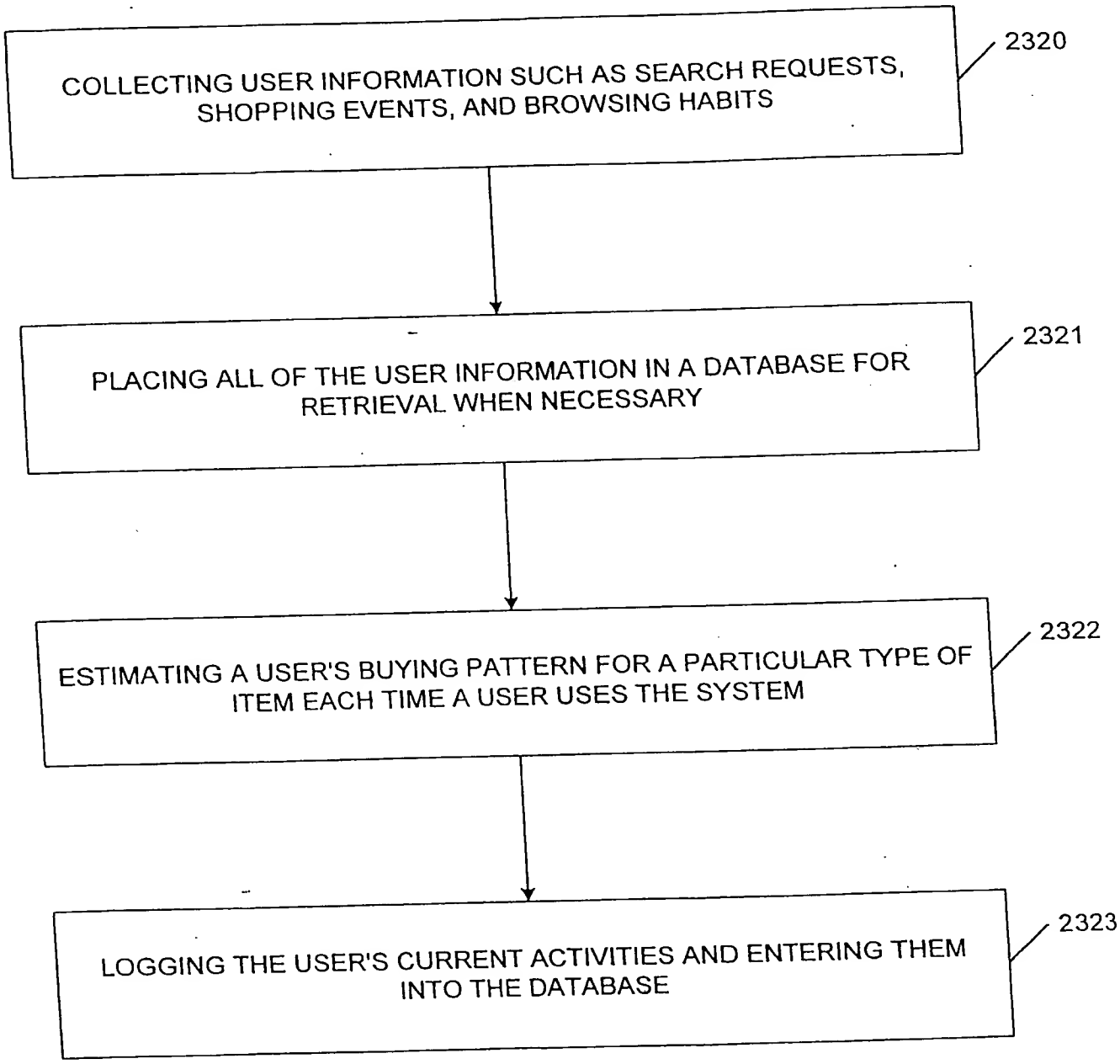

Figure 23B

O.I.P.E
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

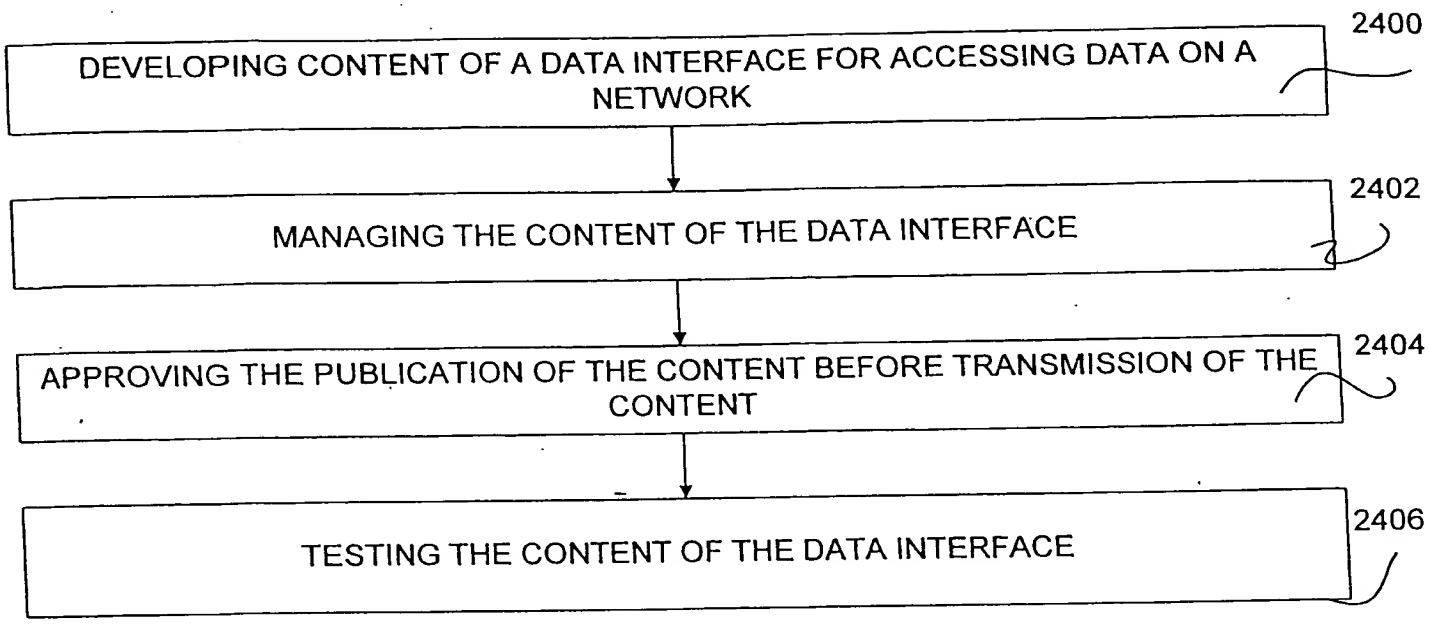

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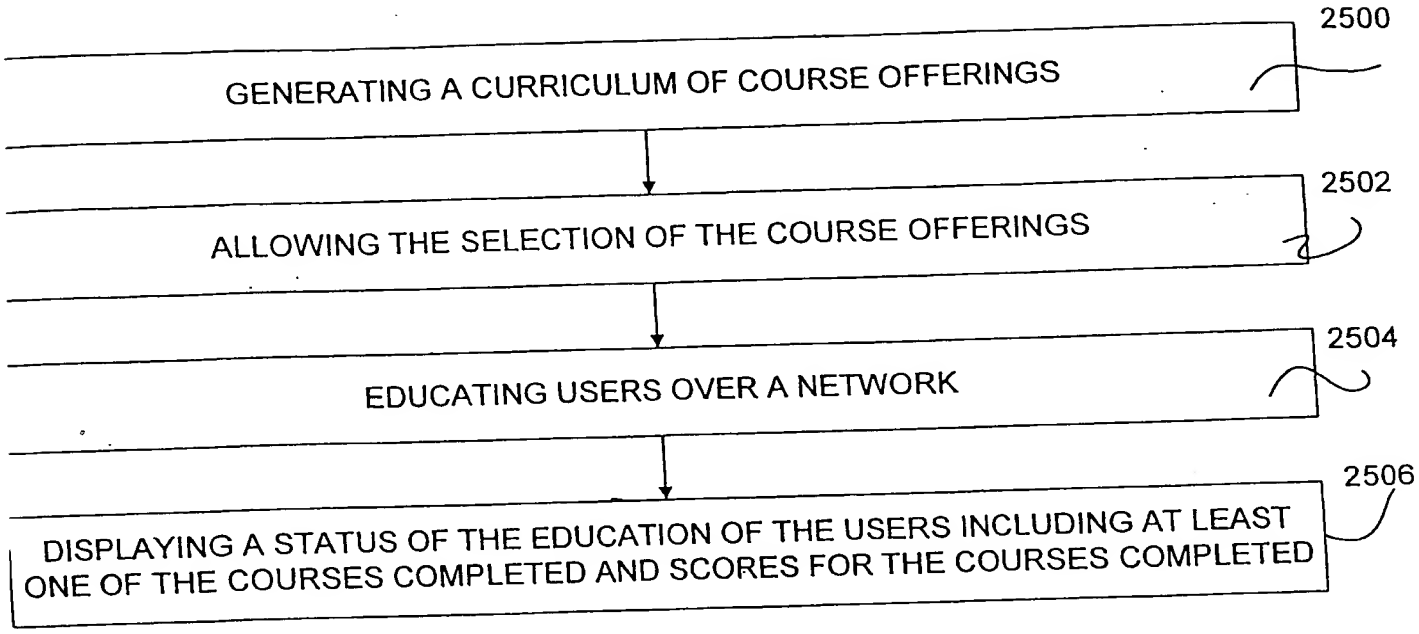
Figure 24

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157



1410

Figure 25

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

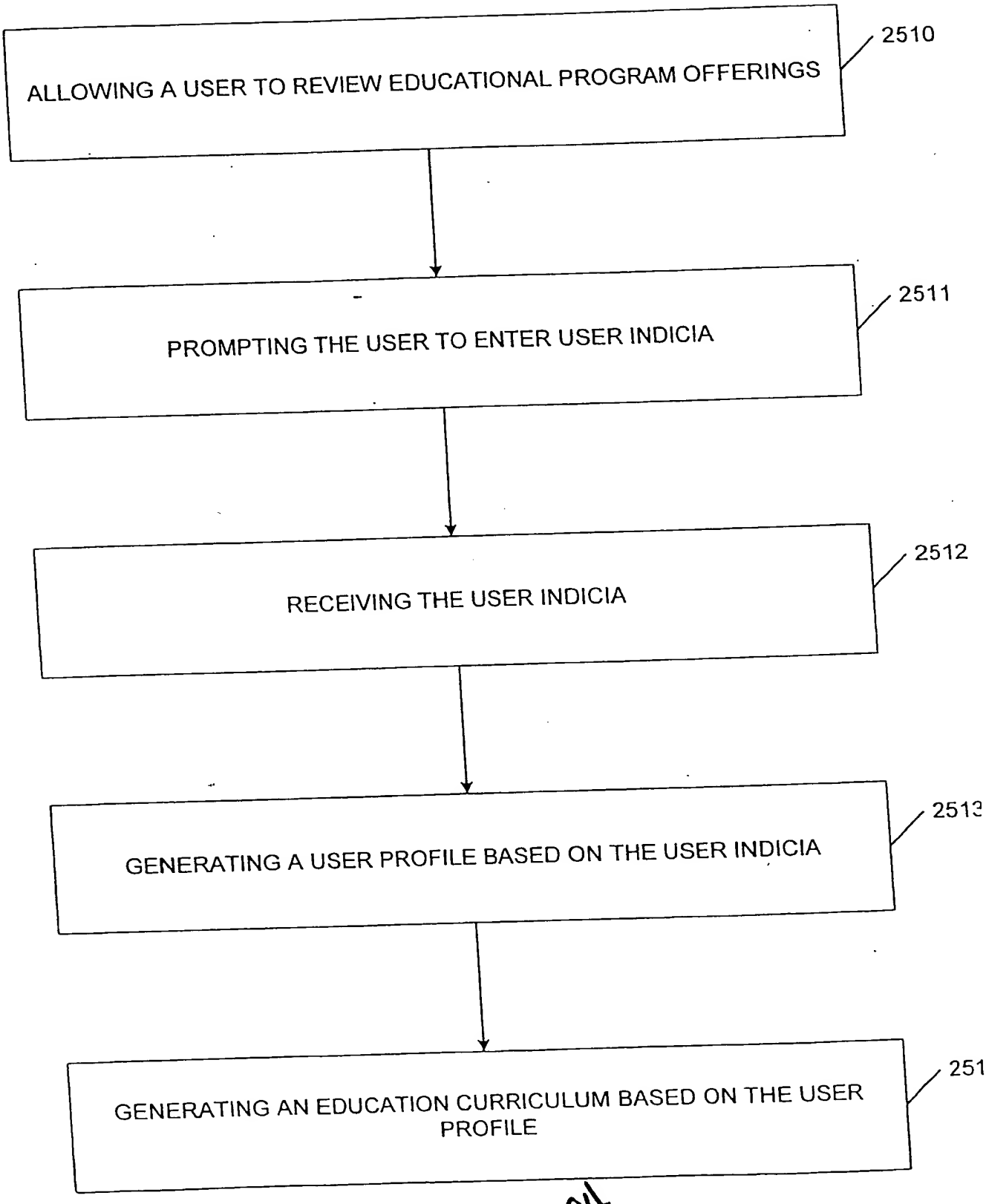


Figure 25A

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

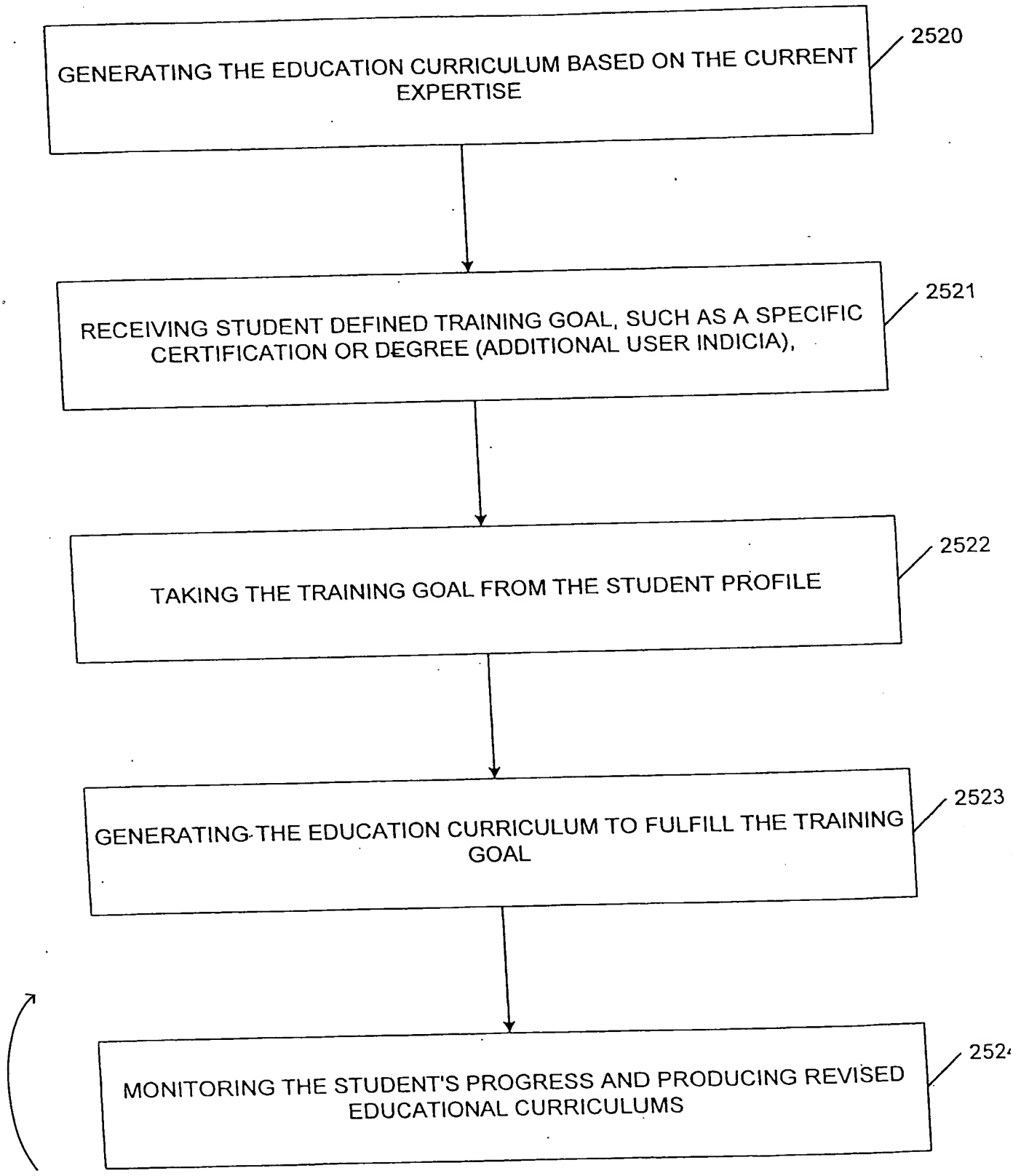


Figure 25B

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

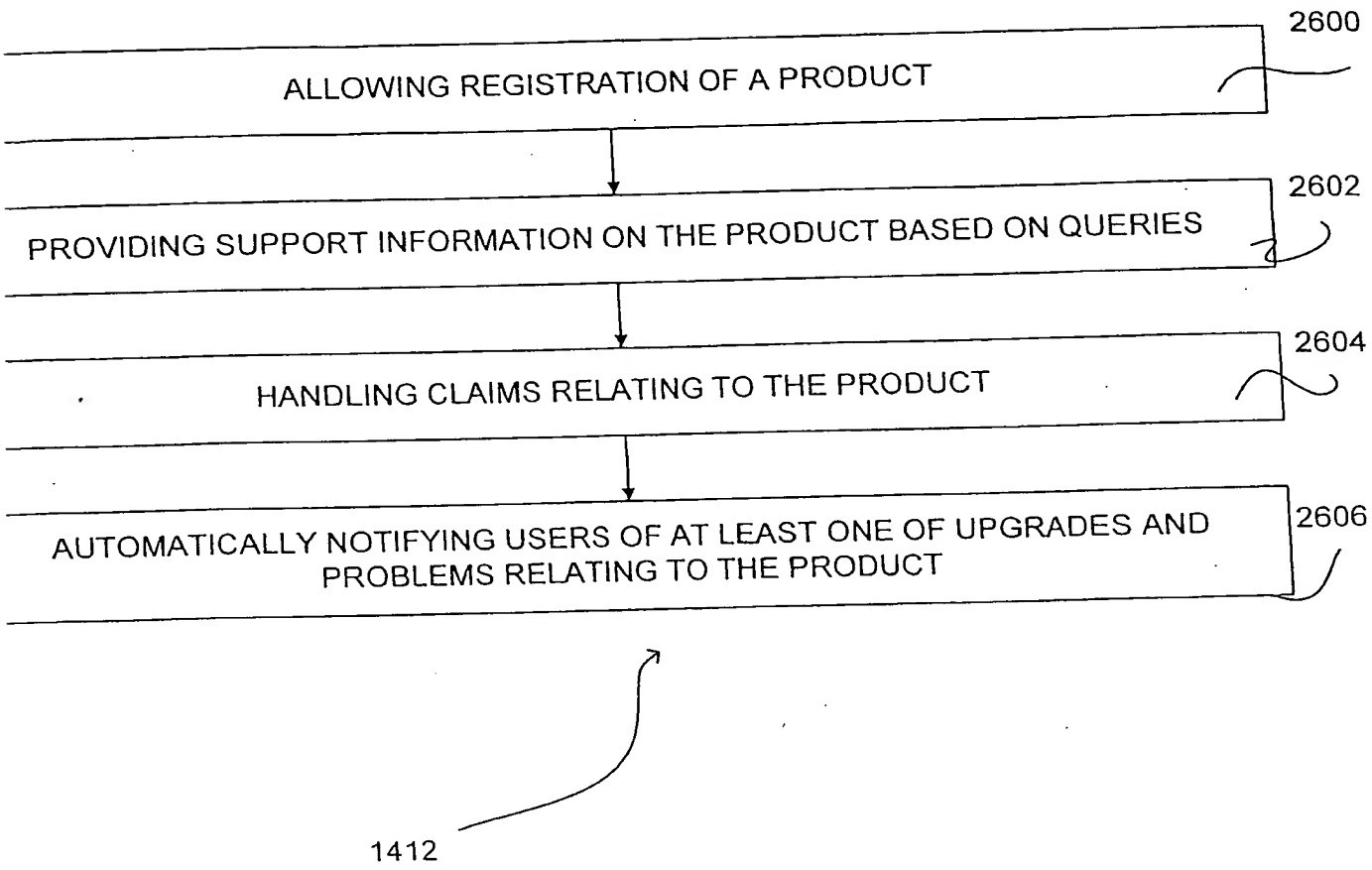


Figure 26

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

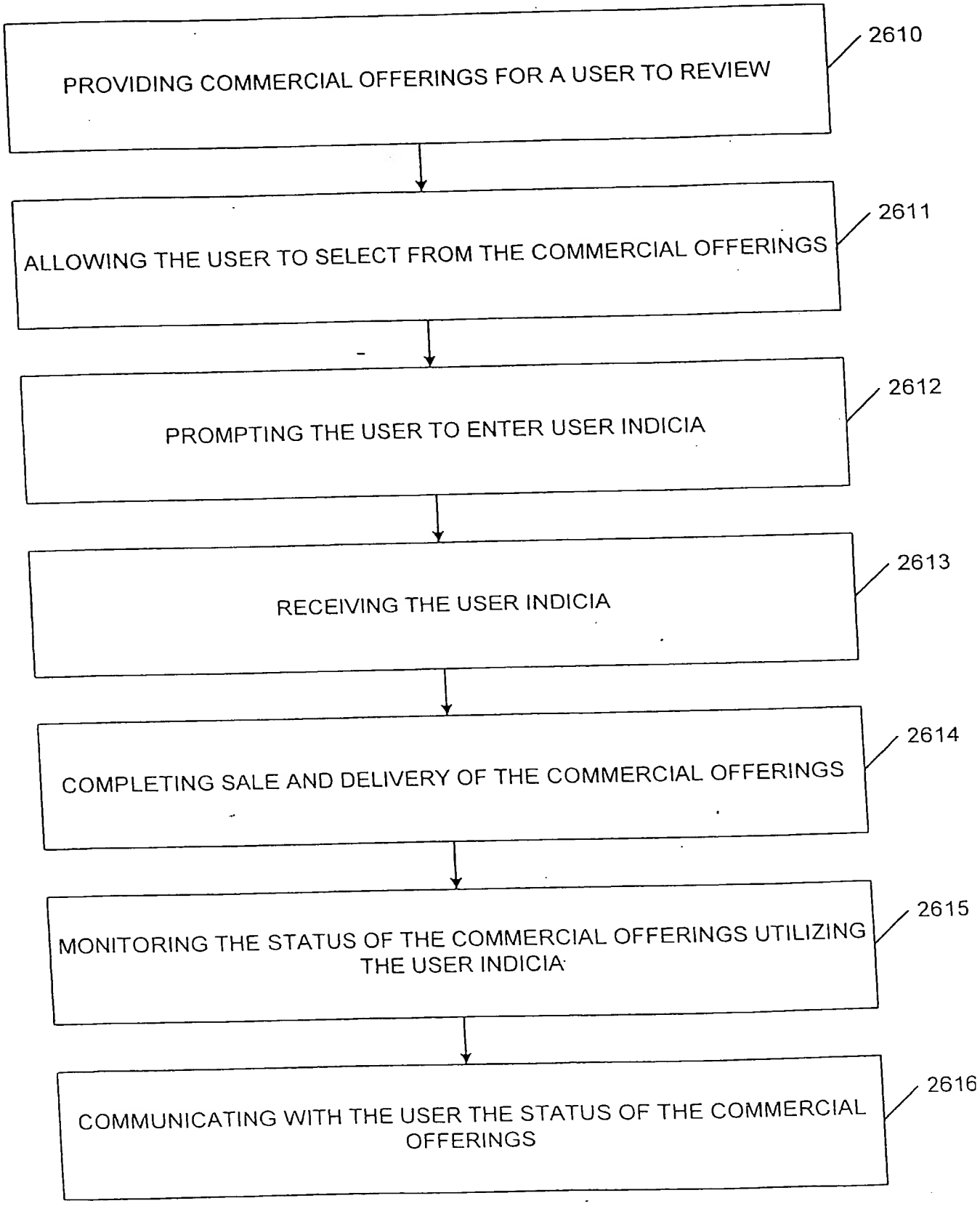


Figure 26A

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC17

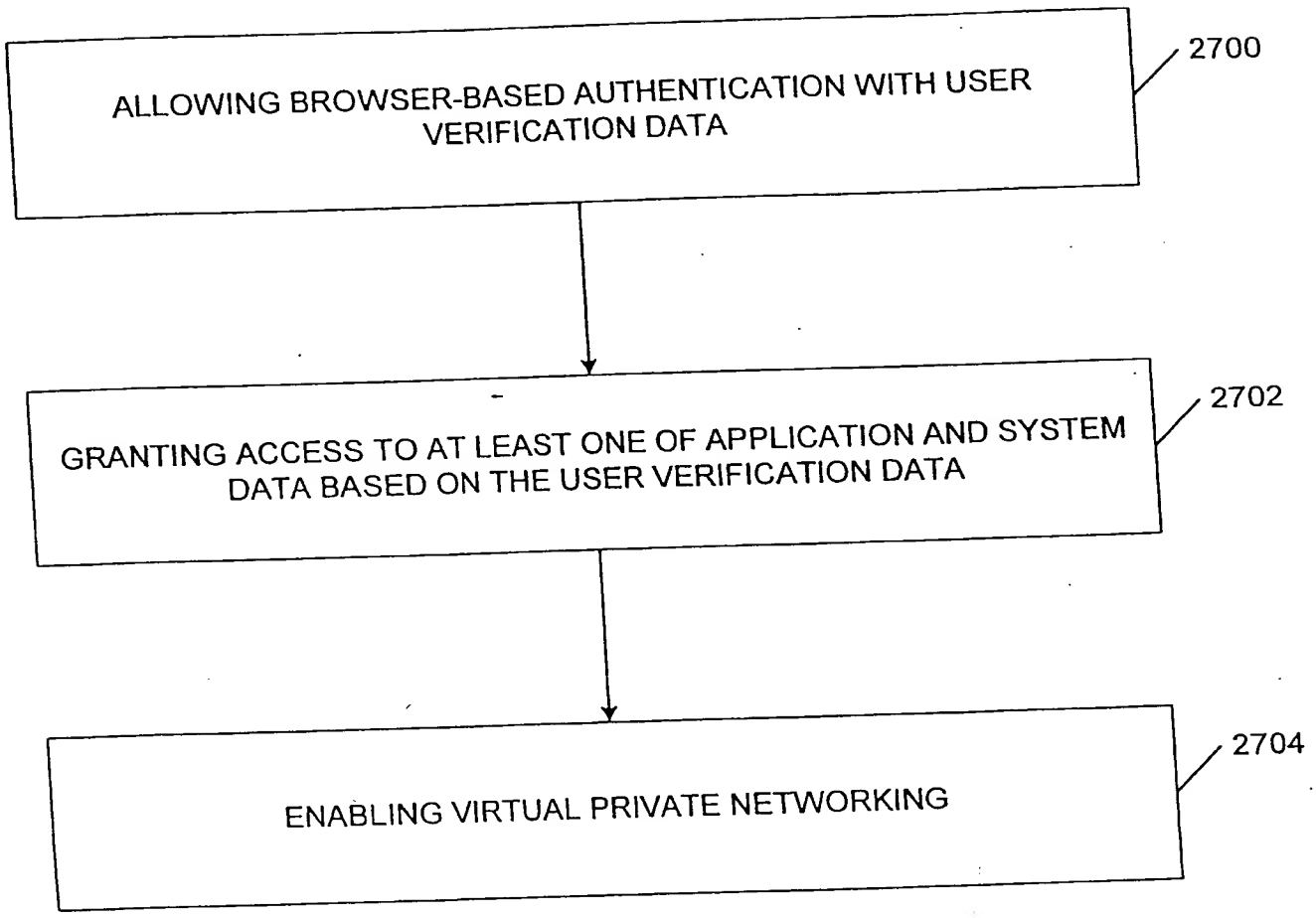


Figure 27

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

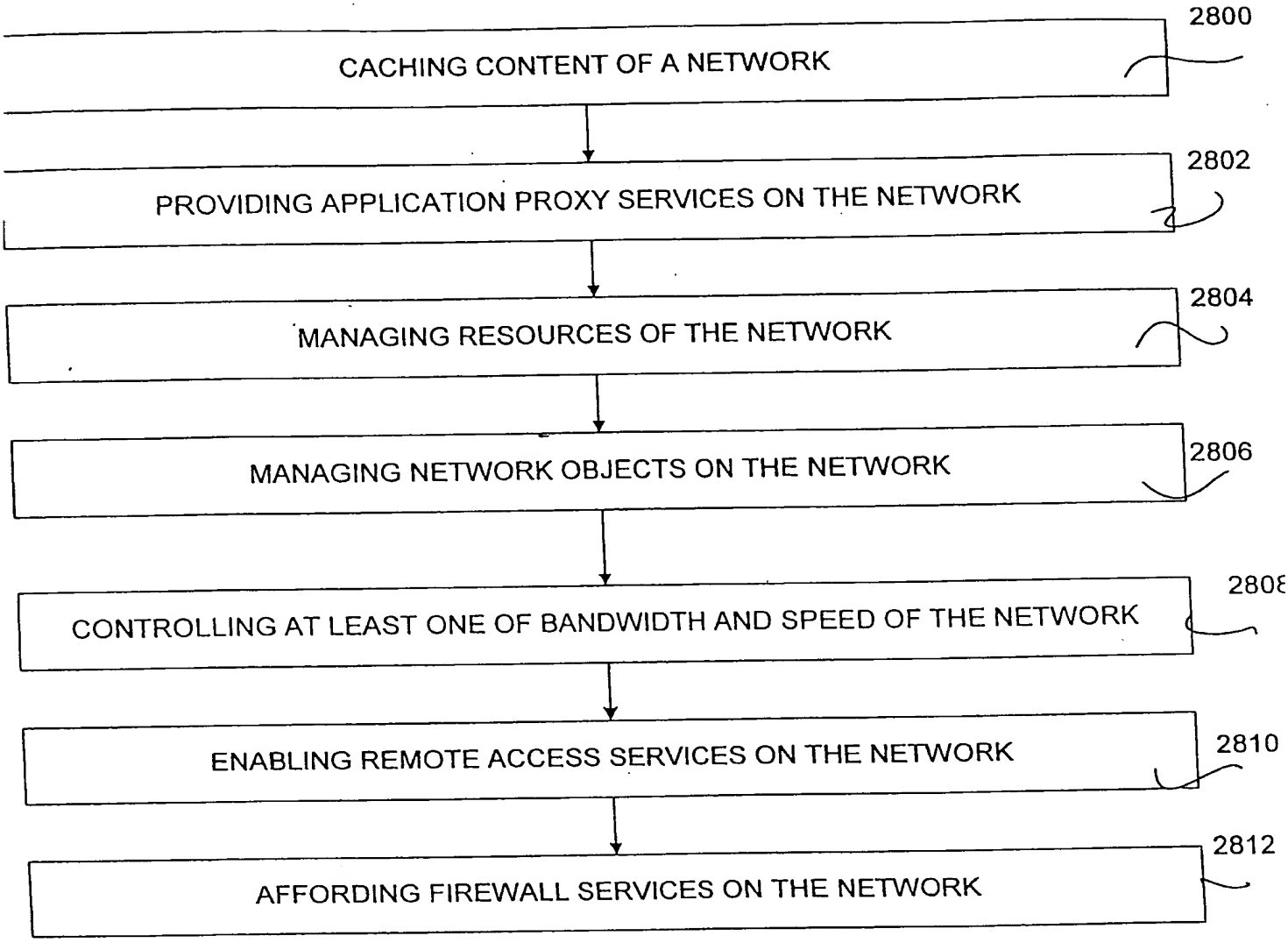


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Figure 28

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PATENT & TRADEMARK OFFICE
JC157

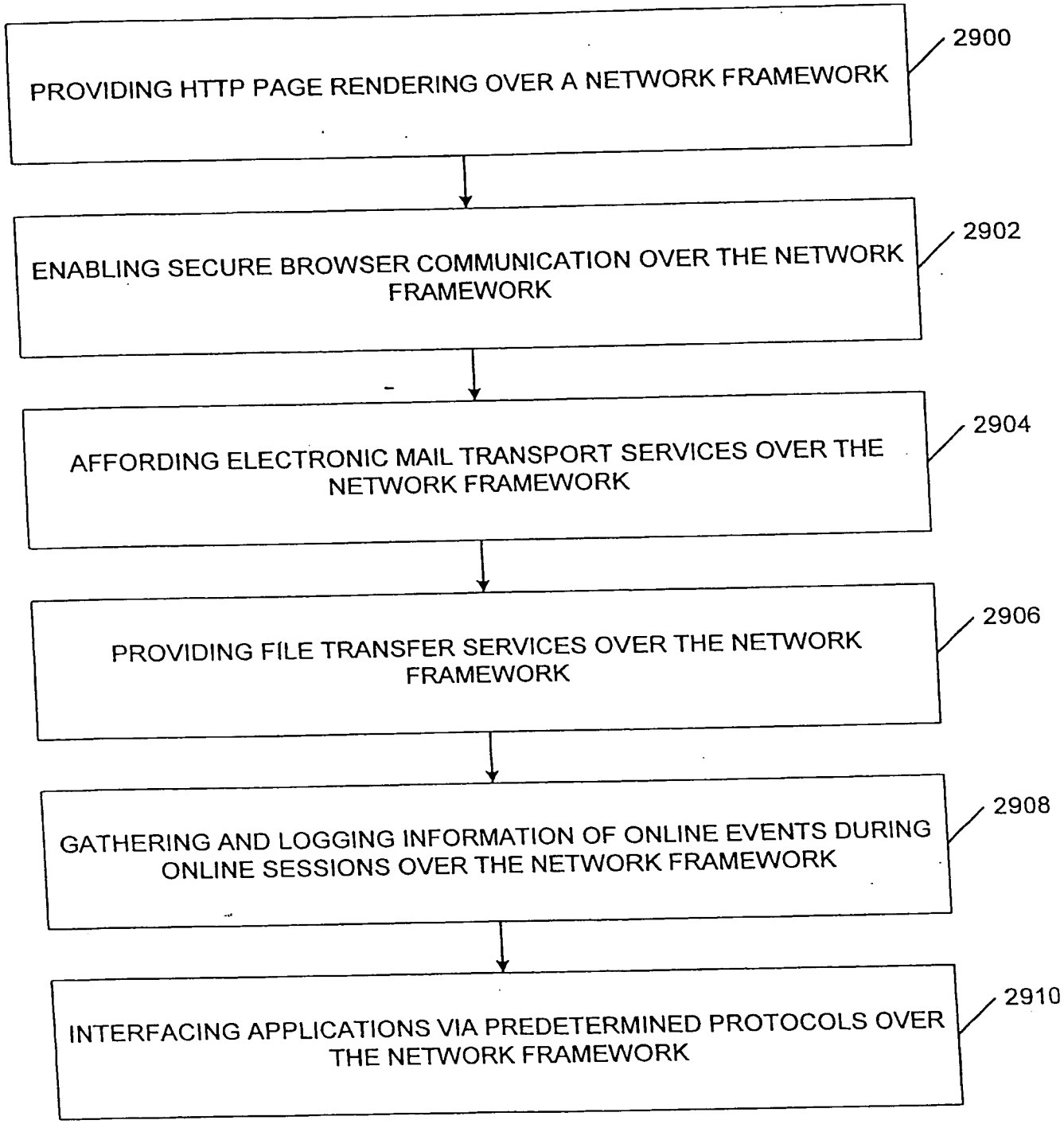

Figure 29 90

OIPE
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JC157

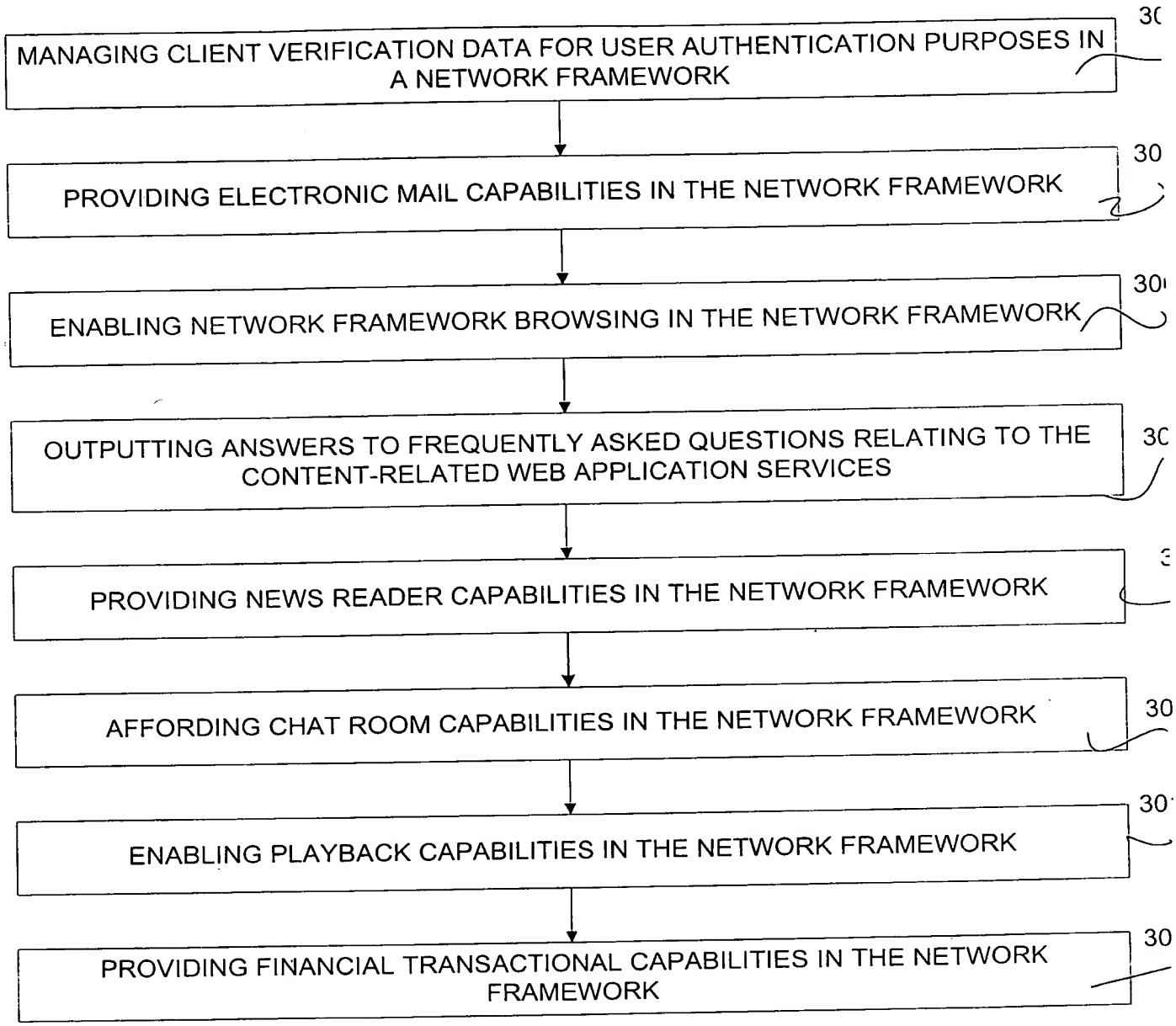

Figure 30

OIPE
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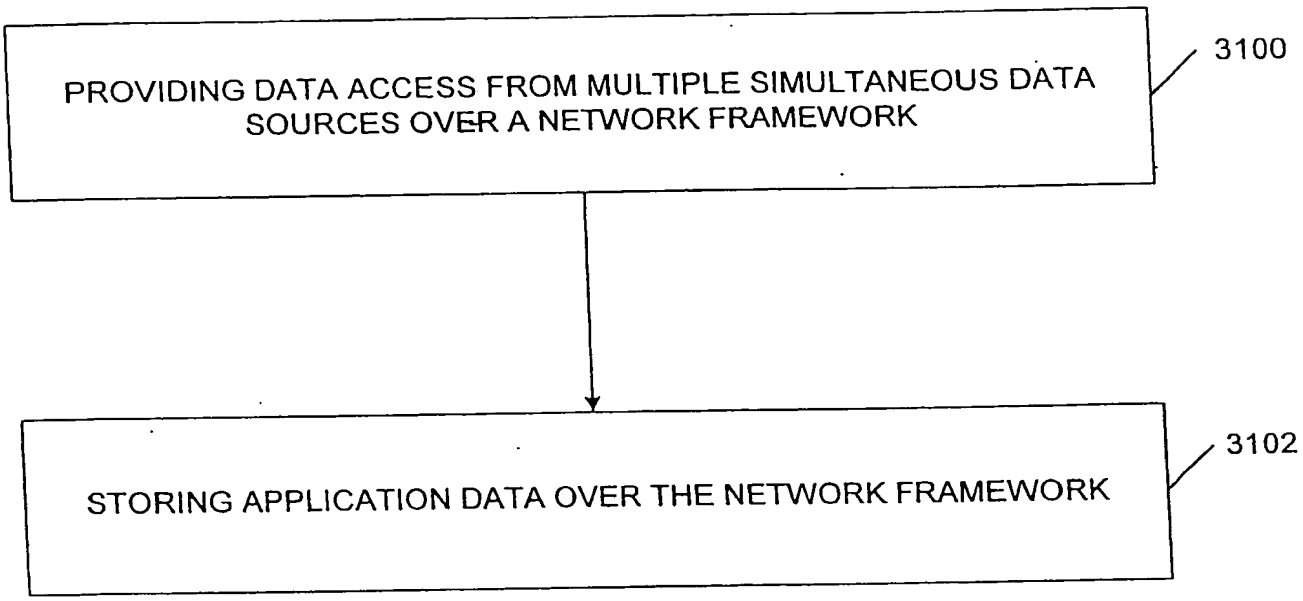
JC157



1424

Figure 31 92

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

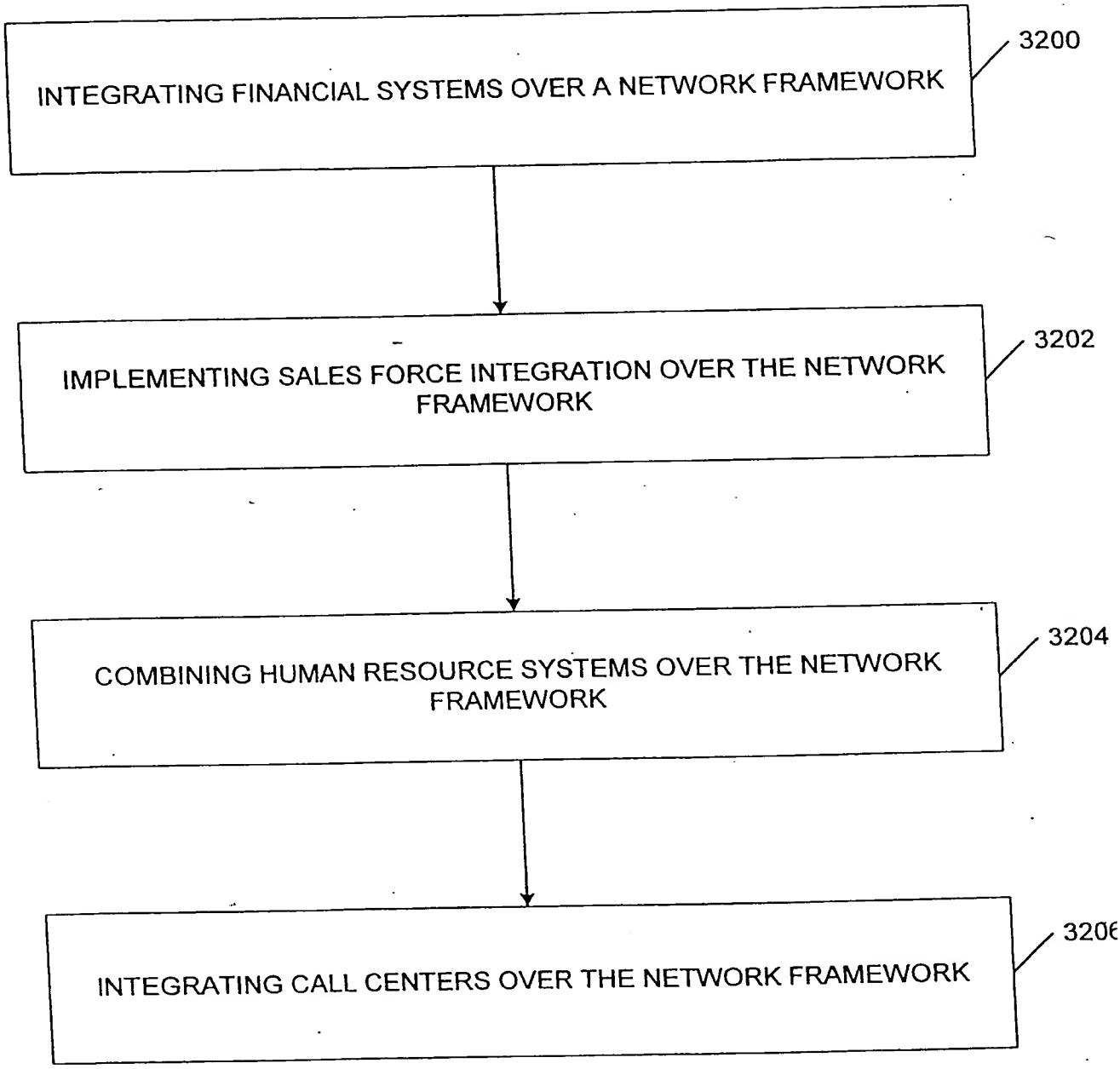


Figure 32

OIPE
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PATENT & TRADEMARK OFFICE
JC157

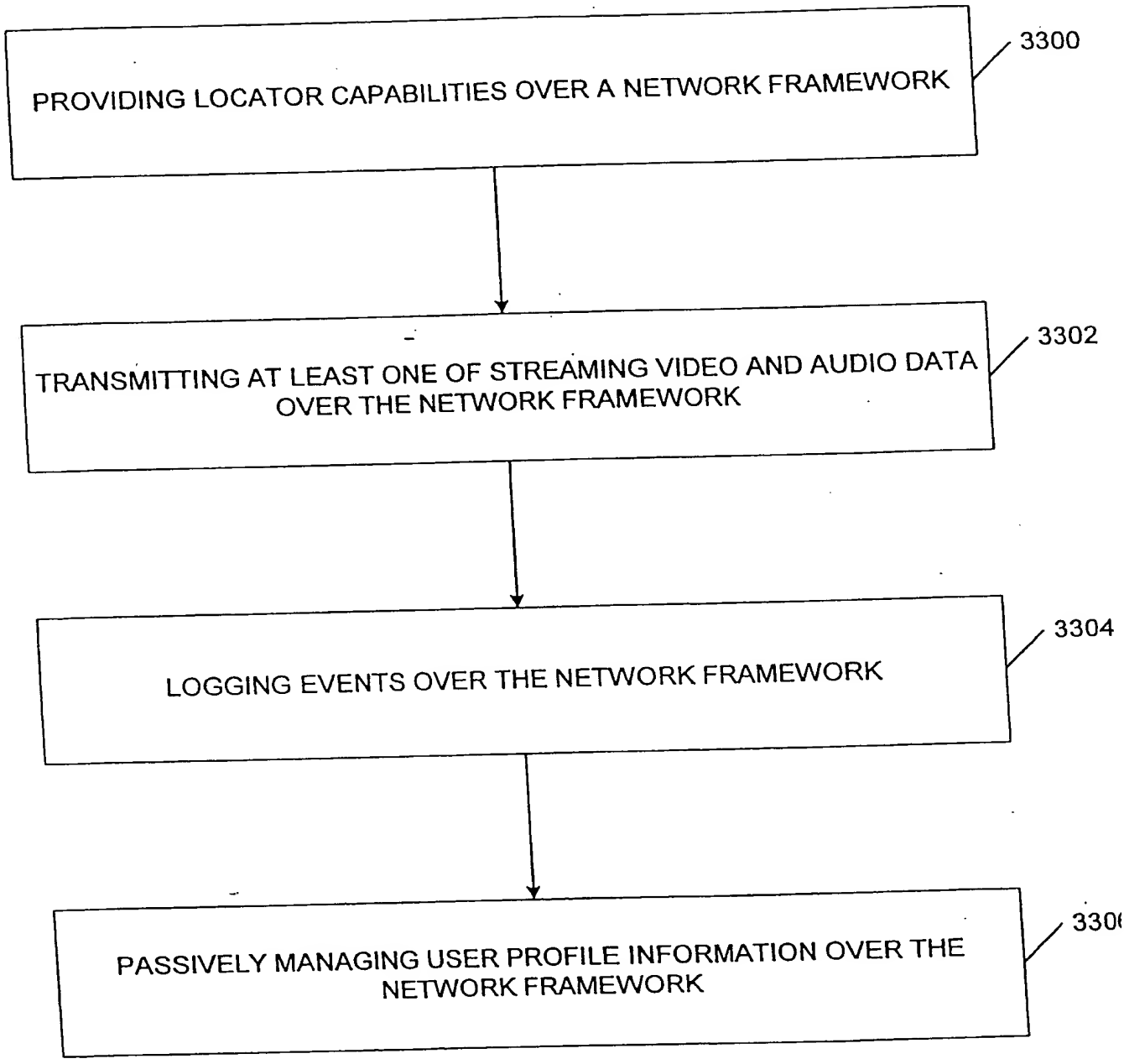

Figure 33

OIPE
MAR 0 3 2003
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JC157

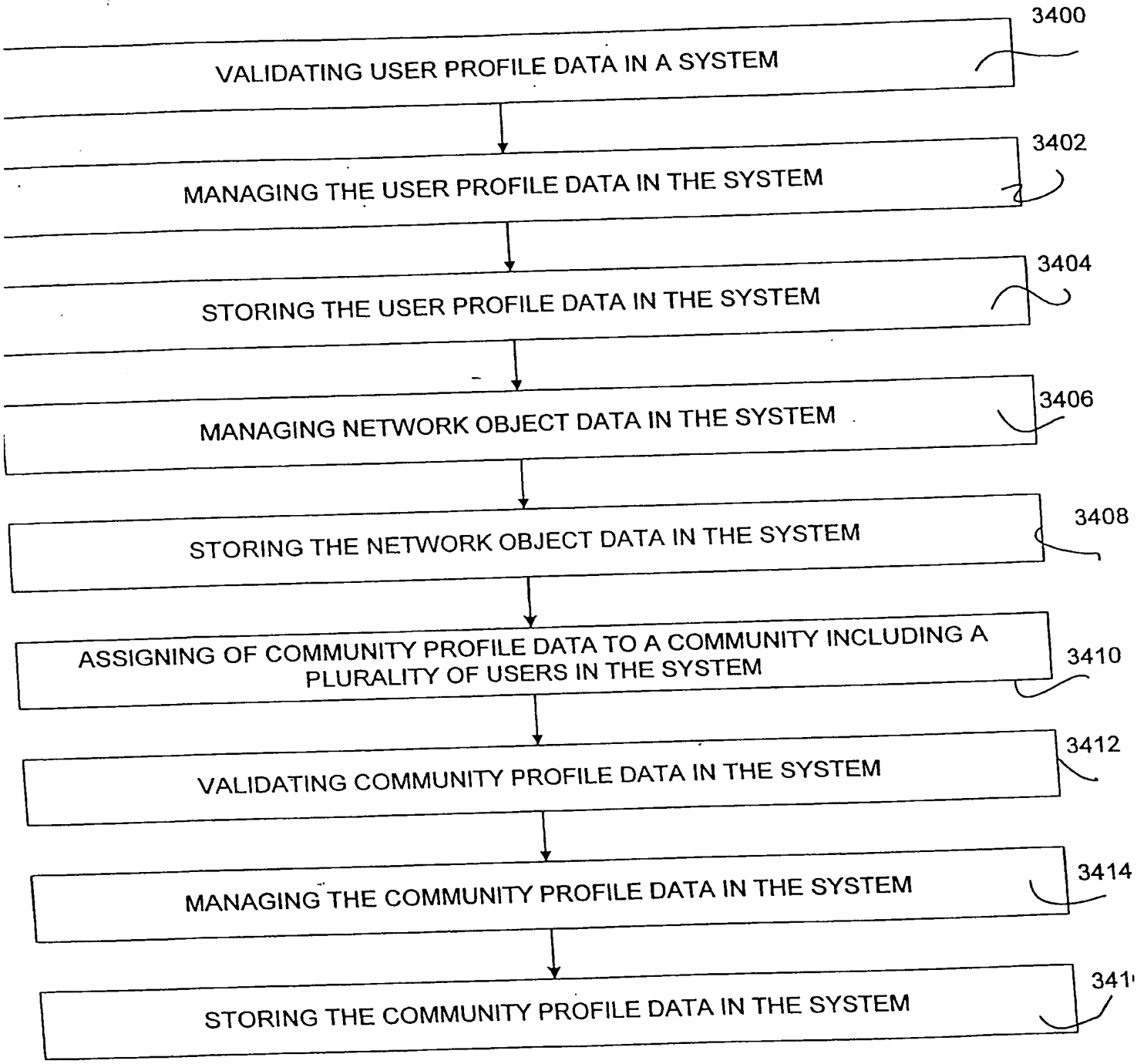

Figure 34

OIPE
MAR 0 3 2003
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JC15

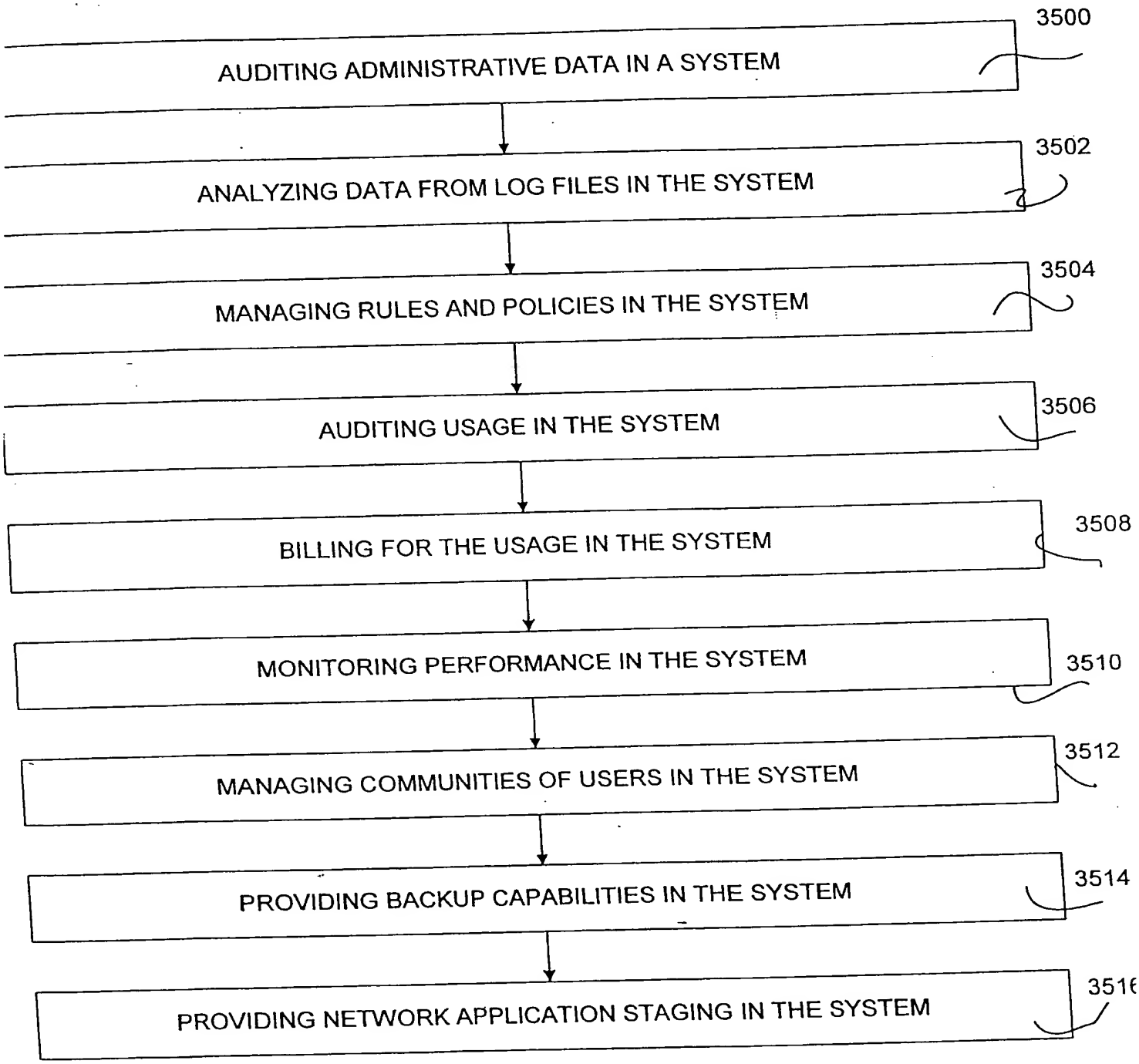

Figure 35

OIPE
MAR 0 3 2003
PATENT & TRADEMARK OFFICE
JC157

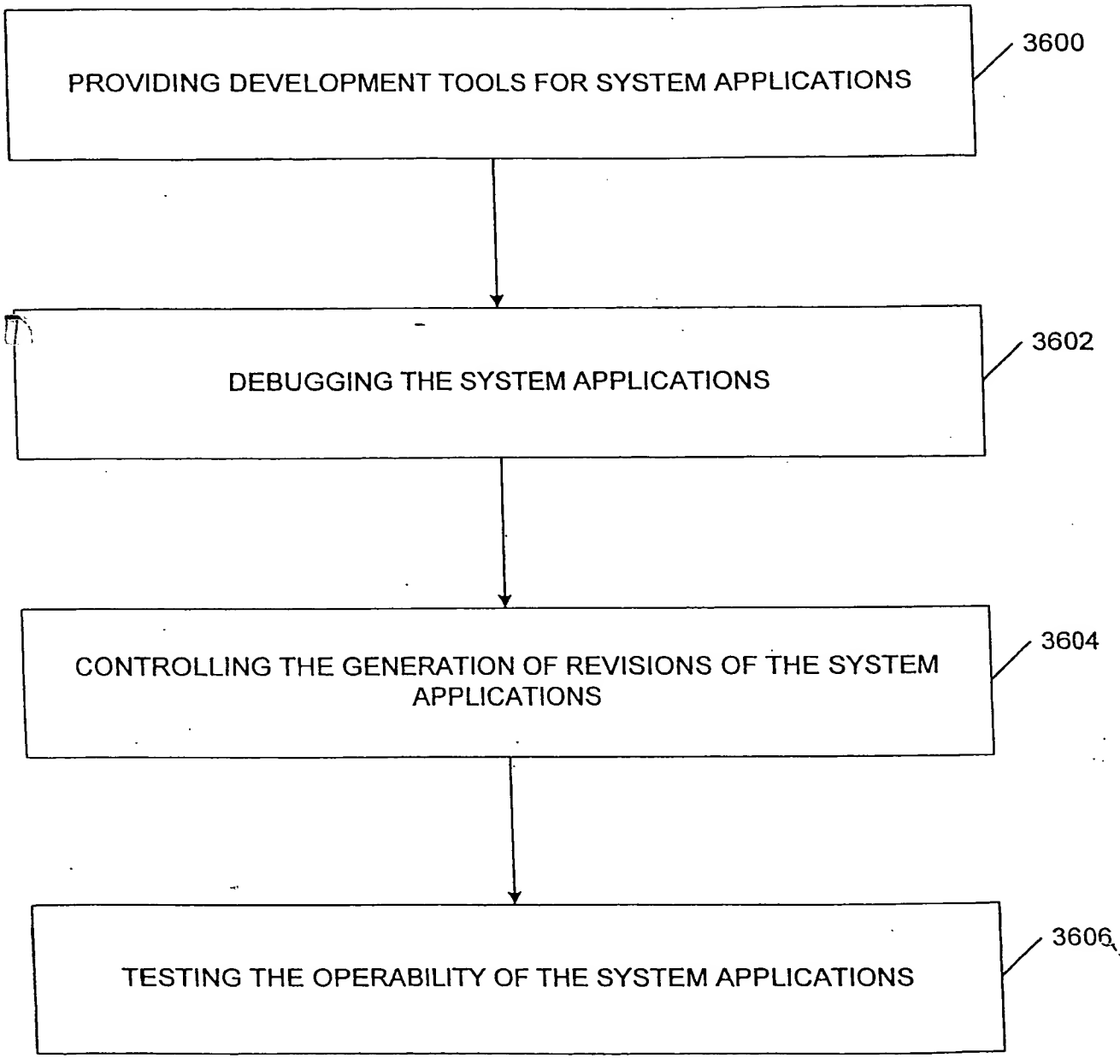

Figure 36